DOCUMENT RESUME

ED 475 564 JC 030 234

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|---|---|
| AUTHOR | Faulkner, Jane B. |
| TITLE | Baldrige Educational Quality Criteria as Another Model for Accreditation in American Community Colleges. |
| PUB DATE | 2002-00-00 |
| NOTE | 173p.; Ed.D Dissertation, Oregon State University. |
| PUB TYPE | Dissertations/Theses - Doctoral Dissertations (041) -- Tests/Questionnaires (160) |
| EDRS PRICE | EDRS Price MF01/PC07 Plus Postage. |
| DESCRIPTORS | Accreditation (Institutions); Community Colleges; *Educational Research; Institutional Administration; *Institutional Evaluation; Institutional Research; Methods Research; *Quality Control; Research Design; Research Methodology; Research Tools; *Standards; Two Year Colleges |
| IDENTIFIERS | *Malcolm Baldrige National Quality Award |

ABSTRACT

Institutional accreditation is a voluntary, non-governmental activity administered by the eight postsecondary accrediting institutions that are part of the six regional associations that serve colleges and universities in the United States. The author cites W. Edwards Deming's work on corporate quality improvement, and its applicability to community colleges. The work of Deming and others contributed to the creation of the Malcolm Baldrige National Quality Award (MBNQA) Program Criteria, a quality framework used to measure institutional effectiveness in the United States. The Award Program, designed to recognize excellence in the private sector, was patterned after the Deming Award in Japan. In 1995, the National Institute of Standards and Technology (NIST) initiated pilot programs in education to gauge the level of readiness of educational institutions to participate in the Baldrige Award Program, and in 1998 President Clinton added education to the list of organizations eligible to apply for the award. This researcher sent survey questionnaires regarding the key aspects of Baldrige Educational Quality Criteria as they relate to institutional planning in community colleges to 202 community college leaders. The response rate was 52.5% (106). The survey includes 6 qualitative questions and 10 demographic questions. The author finds there to be more interest in the Baldrige criteria by accrediting associations than by community college leaders. Research instrument appended. (Contains 91 references, 20 figures, and 1 table.) (NB)

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# AN ABSTRACT OF THE DISSERTATION OF

Jane B. Faulkner for the degree of Doctor of Education in Education presented on April 30, 2002.
Title: Baldrige Educational Quality Criteria as Another Model for Accreditation in American Community Colleges.

Abstract approved: Alex A. Sanchez
Alex A. Sanchez

This is a study of how the use of Baldrige Educational Quality Criteria provides community college leaders and external evaluators with richer, more meaningful data for organizational improvement, more comprehensive information about the institution, and a better means for illustrating clear connections between campus systems and processes. This study was guided by the following research questions: How do community college leaders who use Baldrige Educational Quality Criteria address institutional planning and measurements of success based on the level of value and practice of quality principles at their institution? What are the benefits and challenges for community colleges using the Baldrige Educational Quality Criteria?

The study's participants included a nationwide sample of 202 community college leaders who are currently using quality principles and processes on their campuses. A total of 106 respondents or 52.5% returned the questionnaire. The study's web-based Baldrige/Institutional Effectiveness Questionnaire comprised 50 quantitative questions on a dual scale of Value and Practice; six qualitative, open-ended questions; and ten demographic questions.

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The overall findings indicated that community college leaders highly value quality principles with slightly lower corresponding scores for the equivalent practice categories. The open-ended questions yielded overwhelmingly positive testimonials from leaders regarding the strength of the Criteria for quality assurance as compared to traditional accreditation practices and models. The vast majority of responding community college leaders considered the Baldrige Educational Quality Criteria as a viable option for accreditation, but they also clearly described the challenges of meeting and applying the Criteria.

The researcher concluded that the use of the Baldrige Criteria by some community colleges for accreditation might better serve the needs of these particular colleges. By incorporating Baldrige's greatest assets such as the emphasis on data gathering/data driven decision-making, the focus on the interconnectedness of all campus systems and processes, and the necessity to align the planning processes with the campus research office into the institutional accreditation process, most community colleges will realize more continuous organizational improvement.

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# Baldrige Educational Quality Criteria as Another Model for Accreditation in American Community Colleges

by
Jane B. Faulkner

A DISSERTATION

Submitted to

Oregon State University

in partial fulfillment of
the requirements for the
degree of

Doctor of Education

Presented April 30, 2002
Commencement June 2002

Doctor of Education dissertation of Jane B. Faulkner presented on April 30, 2002.

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I understand that my dissertation will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my dissertation to any reader upon request.

Jane B. Faulkner

Jane B. Faulkner, Author

# ACKNOWLEDGMENTS

There were many special people who helped me bring this study to a successful completion. The following individuals deserve specific recognition:

My advisor, Dr. Alex Sanchez, who shared his insight, wisdom, and advice.

My secondary professor, Dr. Betty Duvall, who lent her guidance and important feedback to the process.

My adjunct professors, Dr. Steve Spangehl and Dr. Chuck Spence who were always insightful, encouraging, and enthusiastic supporters of this endeavor.

My Graduate Council Representative, Dr. Jim Cornelius who provided guidance even while on sabbatical in New Zealand.

The faculty members in the OSU School of Education who demonstrated their enthusiasm for education and dedication to facilitating my learning process.

My dear friend and colleague, Monica Anderson, who generously gave of her time, talent, and insight throughout the entire process.

Mike Dowdle and Barbara Silverman who lent their expertise and guidance.

My family, friends, and colleagues at Mt. San Antonio College (Mt. SAC) who contributed candid suggestions, advice, and feedback.

My Cohort 8 classmates, who provided their genuine friendship that included hours of pure joy and laughter.

And finally, my best friends (Laurette and Dorie) and supportive family members (Mom, Dad, and Gary) who provided total support and genuine encouragement to help me realize my goal.

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# DEDICATION

I dedicate this dissertation and my doctoral degree to my parents, Don and Judy Skraba of Laguna Niguel, California. This doctoral process was one of my lifelong goals. It was an ambitious endeavor, realized because of their unconditional love and profound generosity. Their lifelong example and belief in the benefits of attaining a higher education served to inspire my ongoing efforts. Thank you with all my heart!

# BALDRIGE EDUCATIONAL QUALITY CRITERIA AS ANOTHER MODEL FOR ACCREDITATION IN AMERICAN COMMUNITY COLLEGES

## INTRODUCTION

### BACKGROUND

Businesses and other organizations have long sought to achieve distinction and prestige via seals of approval and specific forms of acknowledgement. Such accolades provide verification of a higher level of quality distinguishing some organizations from their peers. Educational institutions are no different. The first higher education accrediting organization was the New England Association, founded in 1885 (CHEA, 2001). But it was not until the World War II years that the majority of colleges and universities sought to achieve institutional accreditation as a means for certifying the achievement of specific admissions standards and transferability of courses. Specific academic areas and professional disciplines soon followed by regulating the standards and practices in their programs. This uniquely American model differs substantially from other regulatory practices throughout the world that still maintain strict control and careful monitoring of higher educational institutions by governmental monitoring processes such as the ministry of education.

OVERVIEW OF ACCREDITATION

The confirmation of accreditation is a notable accomplishment for all academic institutions. This distinction allows colleges to access federal funding sources through grants and financial aid, guards against the threat of substandard educational organizations with questionable business practices or lower academic standards, and reassures students and the public regarding the institution's high standards of accountability and academic compliance. The Council for Higher Education Accreditation (CHEA) emphasizes,

> As it evolved, accreditation became one of the three major processes higher education uses to maintain public accountability as it improves its quality and usefulness to society. The other two processes are: regulation, through compliance with governmental mandates, laws, and statutes; and competition, through success in the marketplace. Whereas regulation concentrates on compliance, and competition on marketability, only accreditation focuses on the integrity of the academic program.
>
> (CHEA, 2001, p. 5)

Institutional accreditation is a voluntary, non-governmental activity administered by the eight post-secondary accrediting commissions that are part of the six regional associations that serve colleges and universities in the United States. The eight accrediting commissions include: 1) the Northwest Association of Schools, Colleges, and Universities; 2) the Accrediting Commission for Community and Junior Colleges (in the Western Association of Schools and Colleges); 3) the Accrediting Commission for Senior Colleges and Universities (in the Western Association of Schools and Colleges); 4) the North Central Association of Colleges and Schools; 5) the Middle States Association of Colleges and Schools; 6) the Southern Association of Colleges and Schools; 7) the New England Association of Schools and Colleges Commission on Institutions of Higher Education; and 8) the New England Association of Schools and Colleges Commission on Technical and Career Institutions. The institutional accreditation self-study process usually occurs once every five to ten years (depending upon the timeline established by the governing regional accrediting association). To achieve the status of an accredited institution, a college must conduct a comprehensive self-study followed by an on-site evaluation by external peer reviewers. During this process, a college must demonstrate its ability to: 1) "operate at a satisfactory level of quality consistent with its stated purposes, 2) confirm that it has appropriate levels of current fiscal resources as well as an on-going ability to obtain significant operating resources, and 3) indicate its commitment to institutional improvement through this review process and compliance with the regional accreditation commission standards" (Watkins, 1992, p. 2).

Faced with increasing pressure for public accountability, "the accreditation model was designed to provide a framework for institutional program review. In addition, the accreditation standards provide a context for assessing institutional effectiveness because a review of the content of the standards clarifies the important educational outcomes and leads toward a focus on the institution's purposes" (Watkins, 1992, p. 4). Watkins (1992) further asserts that the "accreditation standards provide a profession-based framework for evaluating new initiative proposals and for making decisions among proposals in an era of scarce resources because each of the standards defines good practice and serves as an indicator of quality" (p. 4).

Each college must demonstrate how it meets or exceeds the regional standards of accreditation. Accrediting "commissions use the term validation instead of investigate or audit to underscore the importance of the institutional self-study as the primary source document for the evaluation visit. A team that validates the self-study confirms that the assertions and evidence presented in the self-study are in fact observable at the institution. The team does not visit a college campus to conduct its own self-study, nor is it there to impose compliance with any standards other than those established by the regional accrediting commission" (AACJC, 2001, p. 1). Oftentimes, the result of a college's accreditation self-study process and the subsequent site team visit is the opportunity to infuse change within the organization. College leaders can use the site team's evaluation report to underscore the importance of addressing critical campus issues and make improvements to specific areas of the institution.

## HISTORY OF THE QUALITY MOVEMENT

Many tools and processes are used to assess and improve quality within an organization. The implementation of quality assessment is another method of self-reflection in order to develop and infuse systemic change and improvement in organizations including community colleges. Total Quality Management (TQM) has been used for improving systems and processes in the corporate world for several decades. Quality is defined in many different ways, but for the purpose of this study "quality" will be defined as "the management of a system to maximize the quality of the system's processes and products to meet or exceed the needs and expectations of the system's customers/clients" (APQC, 2001, p. 1).

Quality management principles emerged from statistical process theory developed by W. Edwards Deming and Walter Shewhart. Deming and Shewhart were colleagues at Bell Telephone Laboratories in the 1930s. Deming first met with Japanese chief executive officers (CEOs) and statisticians in 1950 (when Deming himself was fifty years old) to address Japan's economic devastation following World War II. Deming's work was not valued in the United States until an American television producer, Clare Crawford-Mason, conducted a series of interviews with Deming (when he was an octogenarian). These interviews created one of the most successful television documentaries in history: "If Japan Can … Why Can't We?" which aired on KNBC on June 24, 1980. After the airing of this documentary, Americans quickly began to take note of Deming's leadership principles. In the documentary Deming states, "If you get gains in productivity only because people work smarter, not harder, that is total profit and it multiplies several times" (Walton, 1986, p. 19). Following this broadcast, Ford Motor Company and General Motors enlisted Deming's aid. Dow Chemical Company, General Electric, Hughes Aircraft, IBM, and Proctor & Gamble were a few of the larger companies which also sought Deming's expertise with seminars for managers, consultation on specific issues, and input on corporate systems and processes.

The core of Deming's (1986) philosophy consists of 14 critical points for corporations to consider, seven deadly diseases that can kill companies, and obstacles that can thwart corporate productivity. Walton (1986) also delineates the specific tools Deming employed when working with companies to improve quality. These seven tools include: the cause-and-effect diagram, the flow chart, the pareto chart, the run (trend) chart, the histogram, the control chart, and the scatter diagram. These quality tools aid leaders in making data-driven decisions. While Walton (1986) describes the importance of data-driven tools as methods to help measure quality improvement, Deming emphasized the role of management. He stated, "failure to understand people is the devastation of western management. It's obvious. America has people. America has natural resources. Japan has people and no natural resources. The difference is management" (p. 248).

McConnell and Ciotti (1995) state, "According to Deming, an organization cannot sustain high-quality performance without effective leadership. Such leadership involves setting a vision, giving workers necessary resources (including education), and empowering them within their areas of expertise" (p. 53). Chung (1999) supports Deming's philosophy by stating,

> We not only have to design and build quality into the product, but also have to think quality into the product. If we think quality while producing a product, providing service to customers, performing a task, or doing anything in daily life, then quality is not simply a way of thinking. It is a way of living – quality becomes a natural part of our lives and our works. Indeed, both quality of work and quality of life (quality of work life included) should be built upon an endless process of continuous improvement (p. 191).

Some community college leaders use Deming's helpful charts to achieve immediate results through better daily decision-making at their institutions. For example, the use of flowcharts is a popular method for depicting all components of a process so leaders can clearly understand the elements involved and determine specific steps to strengthen. The Deming Management Method further clarifies that "only with the proper use of statistical methods can people minimize confusion in the presence of variation. Statistical methods help to understand processes, to bring them under control, and then to improve them. Otherwise, people will forever be 'putting out fires' rather than improving the system" (Walton, 1986, p. 96). Deming's quality tools bring the focus away from subjective data to objective data so teams can work together in a more neutral, non-biased context to achieve solutions to challenges. Succinctly summarized, Deming's concept connected the quality improvement through systems management with improved productivity. Cornesky (1992) adds, "Deming's philosophy can be applied by concentrating on each unit of the college in its role as a user of systems to supply service to other units, i.e. customers" (p. ii).

Another founder of the quality revolution was Joseph Juran who created a quality model known as The Juran Trilogy (Juran, 1989). The Juran Trilogy addresses the concepts of Quality Planning (developing products and processes to meet customer needs), Quality Control (evaluating the goods produced or services provided to determine quality performance), and Quality Improvement (raising quality performance to unprecedented levels). More specifically, Quality

Improvement relies on measuring annual improvements, identifying areas needing improvement, and establishing project teams to achieve improvement in particular areas of the organization.

Philip Crosby's application of quality principles to a manufacturing context illustrates his main premise of "do it right the first time" with an emphasis on zero defects. Crosby's (1979) "Absolutes of Quality Management" include: 1) Conformance to Requirements -- how well an organization meets the requirements of its customers, 2) Prevention -- the only way to produce high quality products is to prevent defects, 3) Zero Defects -- the production of defect-free products all of the time, and 4) Price of Non-Conformance -- the costs associated with the production of sub-standard goods that result in re-work costs, loss of business, and unsatisfied customers.

Deming's work as well as the efforts of Juran and Crosby influenced the creation of a specific quality framework used to measure institutional effectiveness in the United States. This framework is known as the Malcolm Baldrige National Quality Award (MBNQA) Program Criteria. The Malcolm Baldrige National Quality Program and the Award are managed by the National Institute of Standards and Technology (NIST), an agency of the United States Department of Commerce (NIST, 2000, p. 1). NIST initiated the MBNQA Program in the late 1980s as a means of recognizing service and manufacturing organizations in the private sector (United States Department of Commerce, 1994). The Malcolm Baldrige National Quality Award, Public Law 100-107, was signed into law on August 20, 1987 by

President Ronald Reagan. The Malcolm Baldrige Award was named for Malcolm Baldrige, who was the Secretary of Commerce for the United States from 1981 until his untimely death in 1987. Baldrige's managerial excellence contributed to long-term improvement in efficiency and effectiveness of government. The Baldrige Award Program is patterned after the highest quality award in Japan known as the Deming Award. In his February 10, 2000 statement to the U.S. House of Representatives, the Director of the National Quality Program, Dr. Harry S. Hertz explained, "The purpose of the National Quality Improvement Act of 1987 was to provide a national program to recognize U.S. companies and other organizations that 'practice effective quality management and as a result make significant improvements in the quality of their goods and services' and to disseminate information about their successful strategies" (p. 1).

Every year, the President of the United States presents the Malcolm Baldrige National Quality Award at a special ceremony in Washington, D.C. Since 1987, over one million copies of the Baldrige Quality Criteria have been distributed and nearly 300 United States companies have applied for the Award. The Baldrige Quality Award has been won by 46 companies including Xerox, Motorola, Ritz Carlton, Federal Express, and Solectron.

Today, 44 states and a dozen countries use the Baldrige Criteria to identify performance excellence in business, education, health care, and governmental agencies. In 1995, NIST initiated pilot programs in the education and health care sectors to gauge the interest level and the readiness of these organizations to participate in the Baldrige Award Program. The American Society for Quality (ASQ) assists in administering the Award Program under contract with NIST. The Criteria for Performance Excellence Booklet (2000) states, "ASQ is dedicated to the ongoing development, advancement, and promotion of quality concepts, principles, and techniques. ASQ strives to be the world's recognized champion and leading authority on all issues related to quality" (p. 1).

On October 30, 1998, President Bill Clinton signed legislation into law allowing educational institutions and health care organizations to apply for the Malcolm Baldrige National Quality Award beginning in 1999. In a February 2, 1998 news release the Director of the Baldrige National Quality Program, Dr. Harry S. Hertz stated, "Increasingly, the costs of healthcare and the need for improved education are affecting our country's economic development and competitiveness" (p. 2). Hertz (1998) added, "The performance excellence concepts embodied in the Baldrige Award Criteria are being seen as a way to help meet these challenges" (p. 2).

In addition to recognition in the United States, "The Baldrige criteria have become the world's most widely accepted model for running an effective business" (Brown, 1998, p. 10). The criteria address most areas that contribute to the operation of a successful organization. The Baldrige Award Criteria and scoring guidelines are powerful assessment instruments helping leaders to identify organizational strengths and opportunities for improvement. The assessment results are used to drive performance improvement in organizations.

## STATEMENT OF THE PROBLEM

Increased public scrutiny and demands for higher accountability have caused community colleges to seek new methods for improving campus processes as well as validating successful practices. While quality principles have historically been used in the business sector and the health care industry to improve productivity and customer satisfaction, these quality tools and techniques have only recently been employed in educational organizations. Some of the accrediting agencies across the country have begun to adopt elements of the Baldrige Criteria as another method for colleges and universities to achieve re-accreditation status. More specifically, the Higher Learning Commission of the North Central Association for Schools and Colleges has established the Academic Quality Improvement Project (AQIP) to encourage and assist institutions with implementing continuous improvement efforts using a set of criteria based on the Baldrige Educational Quality Criteria. As more community colleges express an interest and desire to apply the Baldrige Criteria as a framework for re-accreditation, community college leaders across the country have raised concerns regarding the benefits and challenges of applying Baldrige Educational Quality Criteria on their campus. In addition, this has been an issue at conference sessions and meetings of other accrediting associations that have received requests about the use of Baldrige Criteria for re-accreditation from community colleges in their regions. Most of the related research to date has focused on baccalaureate level institutions rather than community colleges. This lack of current research related to the use of Baldrige Educational Quality Criteria in community colleges and the growing interest in this area present a need for further study of this topic.

## PURPOSE OF THE STUDY

The purpose of this study is to evaluate the use of the Baldrige Educational Quality Criteria as another model for meeting regional accreditation requirements in community colleges. Patterns and key attributes that promote the use of quality processes in community college will be noted. The quantitative analysis aspect of this study will evaluate the "value" and "practice" of the quality-based planning processes according to rankings by questionnaire respondents. The goal is to determine whether community college leaders familiar with quality principles consider the Baldrige Educational Quality Criteria as an appropriate method for meeting regional accreditation standards.

## RESEARCH QUESTIONS

The hypothesis for this study is that the use of Baldrige Educational Quality Criteria provides community college leaders and external evaluators with richer, more meaningful data for organizational improvement, more comprehensive information about the institution, and a better means for illustrating clear connections between campus systems and processes.

**Research Question One:** How do community college leaders who use Baldrige Educational Quality Criteria address institutional planning and measurements of success based on the level of value and practice of quality principles at their institution?

**Research Question Two:** What are the potential benefits and challenges for community colleges using the Baldrige Educational Quality Criteria?

## SIGNIFICANCE OF THE STUDY

This study analyzed the unique aspects of the Baldrige Educational Quality Criteria framework as applied in community colleges across the nation. Much has been written about the important role of regional accreditation standards in improving educational performance. Similarly, a wide body of literature exists addressing the value of continuous quality improvement initiatives. Although the use of Baldrige Educational Quality Criteria as another model for regional accreditation has begun to be discussed widely at local, regional, and national levels, limited research and literature are available examining the benefits and challenges associated with using quality criteria. In addition, although several community colleges across the United States have recently begun to use Baldrige Educational Quality Criteria as a means for satisfying accreditation requirements, few studies have solicited quantitative and qualitative input on this topic from community college leaders.

## ASSUMPTIONS

The research for this study was conducted based on the following assumptions:

1. The survey population included community college leaders who were familiar with and have used quality processes and tools on their campuses.
2. The 34 community colleges surveyed represented a majority of the community colleges across the nation that have implemented quality principles to some degree on their campuses.

## DESIGN OF THE STUDY

The research was based on literature review, survey methodology, quantitative data analysis techniques, and qualitative data analyses. The specific design of this study was to survey a broad sample of 202 community college leaders representing 34 different institutions. The survey sample included community college leaders across the country who are knowledgeable of quality principles and have implemented them to some degree at their institution. Further details related to the design of this study are described in Chapter III.

## SCOPE OF THE STUDY

### Delimitations of the study

The following delimitations were given for the study to provide clarity and direction:

1. The unit of analysis for this study was community college leaders who have used the Baldrige Educational Quality Criteria for institutional effectiveness on their campuses.

2. This study was not designed as an evaluation of the Baldrige Educational Quality Criteria.

## Limitations

1. A limited number of community colleges have used the Baldrige Educational Quality Criteria framework as a model for regional accreditation.
2. Community college leaders who are familiar with quality processes and tools found in the Baldrige Educational Quality Criteria have not used these quality processes in their institutions for many years (typically five years or less with only a few having used quality processes for as many as ten years).

## RESEARCHER DISCLOSURE STATEMENT

Over the past ten years, the researcher developed a thorough understanding of quality principles and applied quality principles and practices on a community college campus. Five years ago, the researcher was actively involved in the use of Baldrige Educational Quality Criteria as a replacement for regional accreditation standards. Given the familiarity with this topic, the researcher was aware of the need to be fully cognizant of the potential influences of researcher bias in this study due to personal experience with and belief in the success of the Baldrige Quality Criteria in college planning processes.

## DEFINITION OF TERMS

Because much of the literature on quality improvement is focused on business and industry, the terms related to quality may not be familiar to educators. For the purposes of this study, the following operational definitions were used for quality-related terms.

**Accreditation** - "Institutional accreditation is a voluntary, non-governmental activity carried out by six regional associations in the United States. Being accredited means that the institution has undergone a period of intensive and comprehensive self-study with an on-site validation by external reviewers, has demonstrated that it operates at a satisfactory level of quality consistent with its stated purposes, has proven that it has satisfactory levels of resources and reasonable belief that the resources will continue, and has expressed its commitment to improving itself through the review process and compliance with regional accreditation commission standards" (AACJC, 1999, p. 1).

**American Productivity and Quality Center (APQC)** - a non-profit education and research organization that assists businesses and public institutions address issues of change and improvement (APQC, 2001).

**American Society for Quality (ASQ)** - a society of individual and organizational members dedicated to the ongoing development, advancement, and promotion of quality concepts, principles, and technologies (ASQ, 2001).

**Baldrige Quality Criteria for Education** - a set of criteria established by the National Institute for Standards and Technology (NIST) that provide a framework for organizational excellence using quality management principles (NIST, 2001).

**Benchmarking** - an ongoing process for improvement of strategies, practices, processes, services, or products in which an organization measures its performance against that of best-in-class organizations and determines how those organizations achieved their performance levels.

**CEO** - Chief Executive Officer (often times this term is used to describe the president of an individual community college or the chancellor of a multi-campus community college district).

**Council for Higher Education Accreditation (CHEA)** - Established in 1996, CHEA addresses national accreditation issues for higher education institutions (CHEA, 2001).

**Continuous Quality Improvement (CQI)** - the ongoing improvement of products, services, or processes through incremental and breakthrough improvements as well as a focus on meeting and/or exceeding customers' expectations and continuously striving to improve all aspects of the institution.

**Continuous Quality Improvement Network (CQIN)** - an organization of approximately 30 community colleges that have demonstrated a basic understanding and dedicated interest in using quality principles for improvement (CQIN, 2001).

**Cross Functional Process** - a process that affects more than one department, area, or function in a system.

**Customer** - whoever receives products and/or services from an individual, group, or organization. Customers may be external or internal to the organization (see "external customer" and "internal customer"). Students as well as vendors, local employers, and other community agencies can be considered customers of a community college.

**Deming Prize** - an award given annually to Japanese organizations that, according to award guidelines, have successfully applied company-wide quality control based on statistical quality control and will maintain it into the future.

**Employee Involvement** - a practice within an organization whereby employees regularly participate in making decisions on how their work areas operate.

**Empowerment** - a condition whereby employees have the authority to make decisions and take action in their work areas without prior approval.

**External Customer** - a person or organization who receives a product, a service, or information but is not part of the organization supplying it (see also "Internal Customer"). External customers can be students as well as vendors, local employers, and other community agencies.

**Flowchart** - a technique for graphically representing all the steps in a process. Flowcharts are drawn to better understand processes. The flowchart is one of the seven tools of quality.

**Fourteen Points** - W. Edwards Deming's 14 management practices to help companies increase their quality and productivity.

**Internal Customer** - the recipient, person or department, of another person's or department's output within an organization (see also "External Customer"). Internal customers can be college faculty, staff, and administrators.

**Kaizen** - a Japanese term that means gradual unending improvement by doing little things better and setting and achieving increasingly higher standards.

**Leadership** - an essential part of a quality improvement effort. Organization leaders must establish a vision, communicate that vision to those in the organization, and provide the tools and knowledge necessary to accomplish the vision.

**Malcolm Baldrige National Quality Award (MBNQA)** - an award established by Congress in 1987 to raise awareness of quality management and to recognize U.S. companies that have implemented successful quality management systems (NIST, 2001).

**National Institute of Standards and Technology (NIST)** - As an agency of the United States Department of Commerce, NIST coordinates the Baldrige National Quality Program (NIST, 2001).

**Operational Process** - a process that affects the operation of one department, area, or function of a system.

**Paradigm** - "a framework of thought that is shared and accepted. Because a paradigm defines boundaries, it is a powerful concept. A fundamental change is a paradigm shift" (Seymour, 1995, pp. 100-101).

**Plan-Do-Check-Act Cycle (PDCA)** - a four-step process for quality improvement. This four-step process is continuously repeated in quality improvement efforts. The plan-do-check-act cycle is sometimes referred to as the Shewhart Cycle.

**Process** - a series of events with its own purpose that supports a larger system and its purpose.

**Quality** - "There are three different kinds of quality – design, output, and process – all of which are necessary components of quality. Quality in design relates to both the output (for example, an academic program that meets students' needs) and the process (for example, the curriculum, instructional approaches, faculty, equipment, scheduling, and other factors that make up the program). Quality output means achieving the desired results. Process quality means that all the steps within the organization's functioning from beginning to end work effectively toward the desired goals. Other kinds of quality are also important in TQM, but process quality is central and is not often considered in other discussions of quality" (Chaffee and Sherr, 1992, p. 22).

**Self-directed Work Teams** - an ongoing team that plans, performs, and improves its own work and develops the ability to do this all without direct supervision. The team is responsible for determining its own direction by choosing its vision, mission, and principles all in interdependence with organizational levels above and with other key teams and players.

**Statistical Process Control (SPC)** - the application of statistical techniques to evaluate a process.

**Statistical Quality Control (SQC)** - the application of statistical techniques to control quality.

**Supplier** - the people who supply service to the customer.

**System** - a collection of processes and people that are aligned toward serving a common aim or purpose.

**Total Quality Management (TQM)** - a management approach to long-term success through customer satisfaction. TQM is based on the participation of all members of an organization in improving processes, products, services, and the organizational culture.

**Transformation** - a change so complete that the new form developed from the change is uniquely different from its previous version.

**Vision** - a description of the ideal future state of an organization, set within the boundaries of its mission.

## SUMMARY

Through the efforts of individuals such as Deming, Juran, Crosby, and others, organizations throughout the world have recognized the importance of adapting tools and processes into the workplace in order to increase quality and efficiency in order to improve systems. Community colleges in the United States have more recently begun to acknowledge the need to re-examine current campus processes in order to improve service, measure results more accurately, and re-align the efforts of the institution. Many of these community colleges have begun to rely upon quality principles and to incorporate Baldrige Educational Quality Criteria into their planning and operational efforts. This study examined the characteristics of the quality-based planning processes used by some community colleges as another model for traditional regional accreditation.

An overview of the purpose, significance, and process of this study have been outlined in this chapter. Prior to conducting this study, the author reviewed the literature to determine the current status of quality improvement in education, specifically in community college environments. This review of literature can be found in Chapter II. The study design and process are described in Chapter III, the data gathered through this study's research are located in Chapter IV, and the findings/recommendations are provided in Chapter V.

# REVIEW OF THE LITERATURE

This chapter cites key literature and research studies that address the issues of assessment and productivity in higher education, accountability concerns related to community colleges, different types of organizational structures inherent in community colleges, an overview of regional accrediting associations, a summary of the Baldrige organization, and an assessment of quality in community colleges. The information in Chapter II builds upon the general Overview of Accreditation and History of the Quality Movement reviewed in Chapter I. The comprehensive literature review in this section provides the foundation for the methodology approach outlined in Chapter III.

## ISSUES OF ASSESSMENT AND PRODUCTIVITY

### Deterioration of public confidence

Lack of confidence in the educational system has certainly captured the headlines over the past several years. The concern among community college leaders is mounting as legislators, community leaders, business executives, media representatives, and taxpayers scrutinize the use of public funds for education and express dismay over the lack of concrete data and quantifiable results.

William Chance (1993, May) directly addresses the issue of public outcry by stating, "Significant pressure for change in higher education is unlikely to develop spontaneously; the source must be external. This is not likely to form, however, until civic skepticism and concern are aroused – until a campaign for improvement based on public distress over the accessibility, responsiveness, quality, and effectiveness of higher education develops" (p. 1). Colleges are further challenged

> to consider the reality of their current situation and take one of two positions: 1) They can offer no response to the scrutiny and the criticisms (or make halfhearted responses), assume that the public will eventually recognize that colleges are doing all and the best that they can, and do nothing more to meet their mission statement goals or earn the satisfaction of diverse constituencies; or 2) they can heed and respond earnestly to current calls for comprehensive assessment and evaluation of their efforts.
>
> (Roueche, Johnson, and Roueche, 1997, p. 1)

Roueche, Johnson and Roueche (1997) continue by stating, "Our survey data reveal that the overwhelming majority of colleges are not engaged in data collection activities that will indicate whether or not they are accomplishing their missions. Moreover, colleges report that selecting and designing appropriate effectiveness measures and determining how best to measure student learning are problematic" (p. 3). In fact, the Accrediting Commission for Community and Junior Colleges (ACCJC) located in the Western Region is grappling with this same issue. In 2001, the ACCJC drafted a new set of proposed standards. In their October 2001 newsletter, the ACCJC explained, "Changes (in accreditation standards) focus institutional attention on student learning outcomes and evidence of their achievement …" (p. 1).

Marchese (1993) proclaims, "The assessment movement broke through these closed-end ways of thinking with the insight that an institution's quality was a function of its contributions to student learning – contributions that are knowable and trackable" (p. 5). The topic of assessing higher education's success and productivity is certainly a timely and challenging one. Kerlin (1999) underscores the importance of this issue by declaring,

> The quality of higher education in the United States emerged as a public issue in the 1980's with several publications that expressed concern with the instructional quality, curriculum content, standards and student outcomes. As a result, assessment has become a high priority focus of legislators, agencies, and institutions. (p. 14)

In his book, Continuous Quality Assurance: Adapting TQM for Community Colleges, Clifford S. Peterson (1993) comments,

> The world outside the college is now demanding that both public and private institutions be accountable to their constituents in terms of meeting goals and objectives. This expectation is currently resulting in well-defined mandates for community colleges on the part of state and federal agencies, accrediting agencies, students, and local communities. Most notable at the present time is a major change in regional accreditation processes, requiring an assessment of stated goals and objectives by colleges and universities seeking re-accreditation. (p. iv)

## Accountability for funds and student achievement

Throughout the 1990s and into the new century, the cry for increased accountability in community colleges has continued. In an article titled "Accountability Reconsidered" from the July 26, 1999 edition of Community College Week, Dr. Martha Kanter, President of De Anza College in Cupertino, California describes the importance and relevance of community college accountability by stating, "In fact, benchmarks, quality indicators, access and success measures, and assessment systems have flooded the requirements and foundations for our 21$^{st}$ Century management information systems, board meetings, and campus conversations" (p. 4). Community college students have also become more consumer savvy. With the variety of different educational options now available (including on-line learning), students are keenly interested in prompt service, value for their investment, and current technology in the classroom.

It is interesting to note that "all of the calls for increased scrutiny and improved assessment and effectiveness measures come at a critical time when funds are shrinking, demands for and expectations of higher education are increasing, and costs are escalating" (Roueche, Johnson, and Roueche, 1997, p. 2). The increased scrutiny and additional accountability measures imposed on community colleges causes campus leaders additional concern due to fear of criticism or harsher penalties and places campuses in a defensive, reactionary mode. In addition, the challenge of operating effectively with dwindling resources intensifies the pressures on institutions and exacerbates the problem for community college leaders. In a February 9, 1998 news release from the National Institute of Standards and Technology, the chancellor of Northwestern University, Arnold Weber declared, "Our greatest challenge to improve education is to insist upon accountability in exchange for the provision of sufficient human and fiscal resources to carry out our missions. The Baldrige Quality Award provides a framework for all educational organizations to demonstrate accountability" (p. 1).

Community colleges often look to external sources or agencies to answer the need for improved and increased institutional assessment and accountability. Sometimes the answer to this overwhelming challenge is not readily available. Seymour (1996) found that "by 1990, according to data from the American Council on Education, eighty-two percent of all colleges were reporting 'assessment activities underway' (Hutchings and Marchese, 1990, p. 14). Even so, accreditation criteria rarely reflect a system linking inputs, processes, and results. In fact, most accreditors continue to require adherence to certain standards, regardless of results" (p. 246).

## ORGANIZATIONAL STRUCTURE OF SILOS VERSUS SYSTEMS

Community college leaders are prone to examining their organization by structure and related responsibilities. These vertically oriented silos reflect very distinct functions and characteristics. Organizational silos may typically be defined by function such as the Student Services Silo, the Instruction Silo, the Business Silo, etc. There may also be mini-silos contained within the structure of the larger silos such as the Admissions Silo, the Counseling Silo, and the Job Placement Silo which are all contained under the larger Student Services Silo.

This vertical alignment has been part of the community college structure for decades and is a familiar and comfortable arrangement for many. Myran, Zeiss, and Howdyshell, (1996) underscore this point,

> For each of these silos, there is a leader who is an advocate for the function, seeks its success, and protects its interests. Unit staff reports to the leader, who then interacts with the leaders at the top

> of the other silos. Communications with other silos take the form of messages thrown over the wall into the next silo in the workflow. Success is measured by the individual success of each silo. (p. 3)

This division of campus areas creates tension and competition among functions in the community college.

Myran, Zeiss, and Howdyshell (1996) state, "Communication with other units is stifled. Staff members have more incentive to communicate within their silo than with people in other units. There may even be sanctions within the unit that discourage cross-functional communication. Issues that need quick responses pile up at the top even though they could be resolved through cross-functional communication at lower levels" (p. 3). This territoriality is common in community colleges and other units of higher education. It really inhibits productivity and creative problem solving due to the fear factor and the perpetuation of mini-fiefdoms.

Conversely, a systemic view of the organization abandons the vertical silo perspective for a horizontal view with threads from various critical processes running throughout the college. These horizontal threads cut across departments, divisions, and silos and are comprised of inter-linking processes within an interconnected system that runs throughout the entire organization. Examples of this include general campus processes such as strategic planning, program review, and annual planning/budgeting cycles. Other more specific processes necessarily involve a variety of campus constituencies including cross-functional process improvement teams for the college work order process or the campus payroll process as well as annual activities such as Commencement planning or professional development offerings. These processes, whether large or small in scope, impact most areas on a campus. Colleges applying a systemic view to these processes include and invite input from representatives throughout the organization rather than assigning the planning and execution of activities to one particular department or area. The entire college then "owns" the process and an institution-wide dialog about how to best use staff, resources, facilities, etc. promotes this cross functional collaboration.

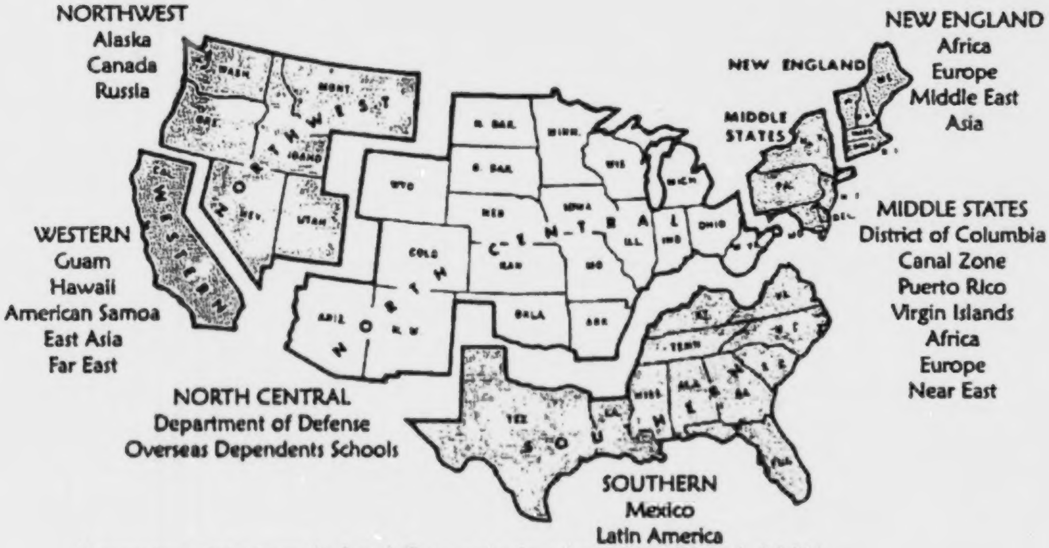
Wheatley (1992) defines a systems view as one derived from a thorough understanding of the components of an organization including how these components are interdependent and interrelated as well as how they contribute to the dynamic whole. A key to understanding the systems view is recognizing its inclusion of internally regulating systems while maintaining a connection to the larger, outside environment. Wheatley notes that all of these components need to be understood, managed, linked, and integrated for the whole organization to be effective.

Oftentimes, when a reform effort is proposed, only small adjustments to part of the system are made. Only on very rare occasions is the entire system examined and changed. For the purposes of this study, a system is defined as a collection of processes and people aligned to serve a common goal or purpose. Because a system is comprised of several parts, with each part being critical to the functioning of the whole, modifications to any process directly impact the larger system. Education in general, but community colleges more specifically, represent extremely complex systems. It is far more difficult to diagnose problems when they are present in a community college, because of the many complex layers and processes interwoven throughout the system. It often requires a great deal of critical analysis to pinpoint the cause of the problem and to track all the ways the problem impacts the entire college.

The systems approach to improvement encourages the careful examination, understanding, and appropriate adjustments to change the system. Improvements to a system usually involve the analysis of processes and sub-systems as well. Demonstrating the use of a systems framework is a key component of the Baldrige Educational Quality Criteria. The Criteria are designed using a set of core values and key concepts. This systems approach links quality and outcomes in an effort to strengthen a college's commitment to measuring and improving results.

## REGIONAL ACCREDITATION SYSTEMS AND THEIR FUNCTIONS

Accreditation is an evaluation of a college based on standards of good practice. The accreditation process represents a quality assurance review. In the United States, there are six private, non-profit voluntary regional accrediting associations for community colleges: the Accrediting Commission for Community and Junior Colleges in the Western Region (located in Santa Rosa, CA), the Northwest Association of Schools, Colleges, and Universities (located in Redmond, WA), the North Central Association of Colleges and Schools (located in Chicago, IL), the Middle States Association of Colleges and Schools (located in Philadelphia, PA), the Southern Association of Colleges and Schools (located in Decatur, GA), and the New England Association of Schools and Colleges Commission on Technical and Career Institutions (located in Bedford, MA). Figure 1 provides an illustration of the six accreditation regions in the United States.


NORTHWEST
Alaska
Canada
Russia
NEW ENGLAND
Africa
Europe
Middle East
Asia
NEW ENGLAND
MIDDLE STATES
MIDDLE STATES
District of Columbia
Canal Zone
Puerto Rico
Virgin Islands
Africa
Europe
Near East
WESTERN
Guam
Hawaii
American Samoa
East Asia
Far East
NORTH CENTRAL
Department of Defense
Overseas Dependents Schools
SOUTHERN
Mexico
Latin America

(www.tea.state.tx.us/school.finance/salary/regaccred.html, 2001)
Figure 1. Map of Regional Accrediting Associations

In her role as Director of the Council for Higher Education Accreditation, Judith S. Eaton possesses a broad perspective on the role of accreditation nationally. Eaton (2001) describes "regional accreditation as one of the oldest and most frequently used forms of institutional quality assurance in the United States. Perhaps to an even greater extent than national, specialized, or professional accreditation, regional accreditation addresses and has been shaped by core academic values" (p. 1). She continues,

> While the accreditation process allows considerable leeway in how these values are honored, the higher education community itself insists that the values be addressed. Accordingly, regional accreditation protects these values. Over the years, standards and criteria have evolved that require the investment of institutional resources in them. Evidence of a lack of institutional commitment to even one of these values is cause for sanctions, from additional scrutiny of an institution to the withdrawal of accreditation. (p. 1)

For numerous decades, accrediting associations have been the primary agencies which higher education institutions have relied upon when seeking to infuse quality and insure the effectiveness of institutional operations. The Summary Report from the Internationalizing Quality Assurance Invitational Seminar sponsored by CHEA and held on January 27, 2000 in Washington D.C. states, " Some sort of framework is needed to protect the quality of education as a 'public good' whether the providers see their efforts as a business or service" (CHEA, 2001, p. 3).

Upholding a level of minimum standards and ensuring good practices in educational institutions is a chief concern for accrediting agencies. Protecting the interests of the public and maintaining their confidence in the American educational system is of utmost importance. The CHEA Summary Report (2001) further states, "In discussing cooperation, the question arose as to the beneficiaries of quality assurance. Was it the students, institutions, government, business and employers, citizens or those protected from questionable providers? There was consensus that the beneficiaries included almost all of the above" (p. 4).

In a February 2, 2001 memorandum from the Western Association for Schools and Colleges' Accrediting Commission for Community and Junior Colleges, Executive Director Dr. David B. Wolf clarified that "accreditation is the education community's system of self regulation" (p. 1). In order for a community college to meet requirements for institutional accreditation or re-affirmation of accreditation, all six of the regional accrediting associations require that comprehensive assessment standards are met. In addition, one of the main benefits of accreditation is that "participation in federal financial aid programs has been limited to accredited institutions" (ACCJC, 2002, p. 2).

In an article titled "A Re-Accreditation Blessing in Disguise" published in Community College Week, Dr. Jacqueline Vietti, the president of Butler County Community College in El Dorado, Kansas begins by stating, "Paying taxes, submitting state reports, and completing a self-study for re-accreditation are among the things many individuals would place in the broad category of life's necessary trials and tribulations" (p. 4). Vietti explains that many community colleges can easily become complacent about issues of efficiency and institutional effectiveness because community colleges (as most segments of education) enjoy the comfort of a long history as well as a perceived protected status in the American educational system. She concludes by encouraging colleges to use the opportunity for re-accreditation as a learning opportunity for the entire organization. Vietti professes, "Since our college has found the process of the institution-wide self-assessment in preparation for our re-accreditation to be one of the most meaningful tools for helping to ensure a challenging, yet promising future, perhaps we should delete completing our re-accreditation self-study from the list of trials and tribulations" (p. 4).

Although community college leaders may view the accreditation process with its cycle of comprehensive self-studies required on a cyclical basis burdensome or perhaps a drain on an institution's resources – financial and temporal, community college leaders also recognize that the accreditation process does in fact encourage community colleges to improve and update current campus procedures and functions. "The self-study represents the institution's understanding of its performance against those standards. Validating the self-study consists of acquiring enough information through interviews, meetings, direct observation, and examination of written evidence to support a professional judgment that the institution meets or exceeds the standards" (ACCJC, 2001, p. 1).

CHEA (2001) identifies the six core academic values of regional accreditation as: institutional autonomy, collegiality and shared governance, the intellectual and academic authority of faculty, the associate degree (in the case of community colleges), general education, and site-based education and a community of learning. These six accreditation core values (CHEA, 2001) are defined as:

1. Institutional Autonomy - independence from government control as a primary characteristic of American higher education.

2. Collegiality and Shared Governance - participatory decision-making emphasizing the importance of collegiality and shared governance in the college environment.
3. Faculty Intellectual and Academic Authority - faculty responsibility for curriculum and academic standards especially course content and expectations of student performance.
4. The Associate Degree - the basis for establishing curricular requirements and the primary means by which community colleges organize the educational experience.
5. General Education - the primary means by which colleges and universities fulfill their responsibility to educate students at the broadest level addressing the goals of education for citizenship and social responsibility, education for social and cultural understanding, education for life, and intellectual development for continued learning.
6. Site-Based Education and a Community of Learning - the opportunity for thoughtful reflection and intellectual stimulation a campus setting provides and the ideal of a community of peers that engages in learning pursuits.

Judith Eaton (2001) notes,

> Regional accreditation explicitly identifies these core academic values with institutional quality. And in fact, for all our debates about what quality means and how to measure it, we rarely question whether these core values are indicators of quality. Many in the academic community would find it inconceivable that an

> institution lacking commitment to these values could be considered to provide a quality higher education environment. (p. 5)

The demand for increased accountability and the infusion of rigorous assessment measures in the community college environment during the 1990s caused many campuses to review current methods of gathering information and tracking institutional success. Accreditation was one technique for gauging success and reporting the results to community college constituents, but many community college leaders felt the emphasis on compliance items was still not enough. Marchese (1993) adds, "More largely, the central idea here is to get managers and work teams to move beyond decision-making by personal impression, anecdote, or complaint ... " (p. 6).

Alternatives to traditional accreditation self-studies have not yet been embraced by many institutions or all accrediting agencies, but the existing opportunities do allow some community colleges an option to develop a different measurement framework that might better serve their and constituent needs in lieu of traditional regional accreditation standards. "Institutional accreditation is in a state of transition that presents remarkable challenges and opportunities to address core issues in higher education. Accreditation serves the academic community and larger public interest by working for quality assurance and institutional improvement" (Accrediting Commission for Community and Junior Colleges, 2001, p. 2).

Even with the possibility of some institutions devising a model to uniquely address their organizational needs, many community colleges are ill-equipped or uncertain as to how to develop an effective accountability framework of their own. They are caught in a conundrum of recognizing gaps in the accreditation model as it applies to their particular organization, yet are frustrated by their inability to address their pressing needs. Peterson (1993) comments,

> Another response to the call for accountability has come from the regional accrediting associations, which are now requiring assessment-based measures of effectiveness as criteria for accreditation. Although this linkage to institutional effectiveness is an important step forward, the quick-fix mentality continues to prevail because these accrediting bodies lack a clear framework for defining effectiveness and incorporating it into the accreditation process. The accreditation guidelines, while mandating assessment, offer no indication of how the data thus generated is to be used. (p. 3)

## QUALITY ASSURANCE COMPARED WITH QUALITY IMPROVEMENT

One of the primary purposes of accreditation reviews is to reassure community college faculty, staff, students, and community members regarding the organization's attainment of basic educational standards of compliance and quality. Community colleges that receive confirmation of re-accreditation pride themselves on providing their students and community members with a quality educational experience. Seymour (1996) argues, "Although accrediting agencies have created specific standards to address institutional effectiveness issues, the integration of processes, results, and improvement efforts is still not a prevalent theme" (p. 248). Seymour's statement addresses the desire of many educational leaders to move beyond basic quality assurance or minimum levels of institutional effectiveness to true quality improvement whereby the institution clearly demonstrates (through specific data elements) regular improvements to its systems and processes. The need to move beyond preliminary assurance levels to marked improvements throughout the college continues to be the sentiment echoed at community college conferences, in the press, and in the chambers of state and federal legislators.

Quality improvement efforts focus on external accountability as well as institutional improvement. Some community colleges rely solely on evaluating the quality of their institution on a routine accreditation cycle and as a result often place their recently completed accreditation self-studies on a shelf until it is time to prepare for the next cyclical accreditation visit (often six to ten years later). This point is underscored by Seymour's (1996) observation, "The traditional pattern of operating in a community college setting typically reflects periods of business as usual with periodic deadlines dictated by program review cycles or accreditation self-study timelines" (p. 58). The danger of this tendency is that community college leaders hurriedly update their previous self-study document as they search for anecdotal evidence to cite in an effort to indicate significant institutional progress. This method of inserting anecdotal evidence while making minor revisions to the previous plan ignores the necessity to provide comprehensive evidence across the entire organization. According to Seymour, this comprehensive evidence must be methodically collected over a span of at least three years (preferably five or more) to denote trends, measurable improvements, and processes or systems that demand further review and concentrated improvement efforts.

On page 204 of High Performing Colleges, Seymour (1996) illustrates the importance of establishing trend data over a considerable period to measure improvement. Seymour cites an example from Judkins (1994, p. 58) stating, "Throughout Texas Instruments, it has been found that it takes about five years of dedicated pulling in the same direction to begin seeing measurable results." Seymour also states, "Valid, reliable indices and trend information prepared in response to policy questions assists decision makers. Historical discussion of the advantages and disadvantages of trend analysis and benchmark data provides a foundation for understanding the CQI concept of best practices" (p. 130).

## BALDRIGE AS AN INSTITUTIONAL ASSESSMENT AND IMPROVEMENT STRATEGY

Data-driven decisions are the foundation of the Baldrige Educational Quality Criteria and are critical to measuring outcomes and results, assessing improvement of campus processes, and achieving alignment of quality efforts. Baldrige moves beyond quality assurance to quality improvement. Without a doubt, "assessment lies at the heart of CQI" (Hubbard, 1993, p. xii). The quality concepts from TQM, CQI, and in the Baldrige Criteria are based on a systematic effort driven by specific data. The emphasis on data driven decision-making found in the Baldrige model is based on the analytical measures that were originally used in Statistical Process Control.

Marchese (1993) explains,

> To achieve its desired transformation, the Total Quality movement over time has gathered in loose union ideas from systems theory, humanistic and industrial psychology, management theory, human resource and organizational development, statistical process control, plus lessons from earlier attempts at quality improvement like quality circles. All of these ideas, in many guises and combinations, aim to remake organizations so they become more focused, disciplined, quick-footed, humane, and competitive (p. 5).

His synopsis of the key facets of quality endeavors accurately conveys the goal of most organizations. He continues adding, "What the quick-to-judge miss – what the early, triumphalist writing about TQM in higher education also misses – is that Total Quality is complicated, important, difficult to implement, and far from figured out" (Marchese, 1993, p. 4).

Through further research, the National Institute of Standards and Technology (NIST) found that investing in quality principles and performance excellence does result in improved productivity, more satisfied employees and customers, and increased profitability. For example, NIST (2001) tracked a hypothetical stock investment in Baldrige Award winners and applicants receiving site visits. The studies have shown how these companies soundly outperform the Standard & Poor's 500. (p. 1).

According to NIST (2001), the number of Baldrige Award applicants is not the sole indicator of overall interest in quality or the award program. The interest in quality and specifically the Baldrige Criteria continues to grow as evidenced by marked increases in participation levels in state and local award programs. A decade ago, less than ten states had quality award programs, but today 43 states have award programs. NIST statistics note that in 1998, state and local quality award programs received over 800 applications. Most of these state quality award programs are modeled directly after the national Baldrige Award. At statewide quality conference sessions, businesses and colleges often indicate that they complete the application for a state quality award program because this serves as a stepping stone to prepare for the national Baldrige Award Program.

There are almost 60 quality award programs operational internationally and almost all of them are based on the Baldrige Award Program. Also, it is important to remember that the emphasis of the Baldrige Award Program is on recognizing organizations that have successful performance management systems and comprehensive processes throughout the organization. Equally important is the award's role in raising awareness about quality by encouraging all U.S. businesses, health care organizations, and educational institutions to set up performance improvement programs prior to applying for the Baldrige Award. (NIST, 2001).

Although the Malcolm Baldrige National Quality Award (MBNQA) was inspired by the W. Edwards Deming's work in Japan, there are some clear distinctions between these two well-known recognition programs (see Figure 2).

| Deming Prize (Japan - 1951) | MBNQA (United States - 1987) |
|---|---|
| • Process Oriented – queries in much more depth on policies, intent, understanding, organization, clarity, methods, standardization, maintenance, appropriateness-determinations<br>• Process Management is composed of several categories in Deming – Standardization, Quality Assurance, Maintenance | • Results and Outcome Oriented – business results accounts for 45% of scoring<br>• Approach & Deployment – share 55% of scoring<br>(It is interesting to note that Process Management is just one criterion that has 10% weight) |
| • Deming Prize addresses leadership separately as a whole checklist (a much more in-depth look at leadership)<br>• Deming Prize does not address customer focus separately (treats customer as imbedded consideration) | • Addresses Leadership & Customer Focus as two of seven criteria<br>• Recent changes in the Baldrige Leadership section have incorporated Corporate Responsibility that previously was only part of Deming – Corporate Social |
| • Takes many years to become eligible for competition (need to go through a rite of passage)<br>• Criteria is somewhat prescriptive in areas of statistical & quality control | • No strict eligibility criteria<br>• Criteria are non-prescriptive by design |

(Daut, 2001).

Figure 2. Comparison of the Deming Prize and the Malcolm Baldrige National Quality Award.

Although the Deming Award and the Baldrige Award both honor quality achievements and increase awareness of quality improvement methods, the Baldrige Award is much more focused on results and customer service whereas the Deming Award is focused on an extensive examination of the organization's leadership and processes (NIST, 2001, p. 1).

## THE BALDRIGE NATIONAL QUALITY AWARD ORGANIZATION

The structure of the Malcolm Baldrige National Quality Award (MBNQA) Program includes the Board of Overseers that serves as the advisory organization on the Baldrige National Quality Program to the Department of Commerce. "The Board is appointed by the Secretary of Commerce and consists of distinguished leaders from all sectors of the U.S. economy" (NIST, 2001, p. 1). The duties of the Board of Overseers include the evaluation of all aspects of the MBNQA, including the adequacy of the criteria and processes for determining award recipients. The Board also assesses how well the program serves the national interest (NIST, 2001, p. 1). In addition, the Board of Examiners evaluates award applications and prepares feedback reports. A panel of judges (part of the Board of Examiners) makes award recommendations to the Director of NIST. The Board consists of experts from the fields of business, health care, and education and in 2000, included approximately 400 members. Of these 400 individuals, the Secretary of Commerce nominates nine judges and approximately 70 Senior Examiners. The remainder of the membership serves as Examiners (NIST, 2001, p. 1).

The Malcolm Baldrige National Quality Program (NIST, 2001) focuses on eleven core values for organizations. These are:

1. Customer-Driven Quality -- Contributing product and service features/characteristics resulting in value to customers and leading to customer satisfaction, preference, and retention. These factors include the relationship with customers that helps build trust, confidence, and loyalty.

2. Leadership -- The creation of strategies, systems, and methods for achieving excellence and building knowledge and capabilities. The strategies and values should help guide all activities and decisions of the organization. Senior leaders also serve as role models, reinforcing the values and expectations and building leadership and initiative throughout the organization.
3. Continuous Improvement and Learning -- The incremental and "breakthrough" improvement combined with the adaptation to change leading to new goals and/or approaches. Improvement and learning need to be "embedded" in the way the organization operates. Improvement and learning are directed toward being more responsive, adaptive, and efficient.
4. Valuing Employees -- A focus on promoting the knowledge, skills, and motivation of employees by providing them with opportunities to learn and practice new skills. Opportunities might include classroom and on-the-job training, job rotation, and pay for demonstrated knowledge and skills.
5. Fast Response -- Improvement of response time through faster and more flexible reactions to situations often requires simplification of work units and processes. Some important benefits derived from this time focus include improvements in organization, quality, and productivity.
6. Design Quality and Prevention -- Design quality depends upon the ability to use information from diverse sources and databases often combining the elements of customer preference, competitive offerings, price, marketplace changes, and external research findings. Problem and waste prevention are

achieved through building quality into products and services and efficiency into production and delivery processes.

7. Long-Range View of the Future -- A more accurate long-range view of the future can be established through the ability to anticipate changes (such as increased expectations by customers), new growth opportunities, technological improvements, new customer segments, evolving regulatory requirements, community/societal expectations, and thrusts by competitors. Future plans, strategies, and resource allocations need to reflect these commitments and changes.
8. Management by Fact -- An organization is better able to manage its operations successfully by extracting larger meaning from data and information to support evaluation and decision making at all levels. This analysis entails using data to determine trends, projections, and cause and effect – and might not be evident without analysis. By creating and using performance measures or indicators (measurable characteristics) of products, services, processes and operations to improve performance, an organization is better positioned to excel in its field.
9. Partnership Development -- Building internal and external partnerships helps an organization achieve its goals. Internal partnerships might also involve creating network relationships among different parts of the organization to improve flexibility, responsiveness, and knowledge sharing. External partnerships include strategic alliances with other customers, suppliers, and educational organizations for a variety of purposes.

10. Public Responsibility and Citizenship -- An organization has a definite responsibility to the public as well as the expectation to practice good citizenship. This includes basic expectations of strong business ethics and the protection of public health, safety, and the environment. Practicing good citizenship refers to leadership and support of publicly important purposes, including areas of public responsibility such as improving health care in the community, environmental excellence, resource conservation, community services, and improving industry and business practices.

11. Results Focus -- This is a focus on key results that are guided by and balanced by the interests of all stakeholders -- customers, employees, stockholders, suppliers and partners, the public, and the community. The use of performance measures offers an effective means to communicate short- and longer-term priorities, to monitor actual performance, and to marshal support for improving results.

Each organization that receives the Baldrige Award is required to share its particular performance and quality strategy techniques with other organizations via presentations at conferences, published articles, and scheduling special presentations/open houses at their facility. NIST (2001) reported,

> during 2000, forty-seven of the country's most prestigious corporations provided financial contributions to the administration of the Baldrige Educational Quality Criteria Program and the Baldrige Health Care Criteria Program. Some of these companies included: Coca-Cola, Eastman Kodak, Henry Ford Foundation, Honeywell Inc., Merck & Company, Motorola, Inc., Pepsi Co, Solectron Corp., State Farm Insurance, 3M, and Union Pacific. (p. 1)

The National Institute of Standards and Technology (NIST) publishes a brochure titled “Why Apply?” (2000) that includes significant quotations from CEOs of Baldrige Award winning organizations. Ko Nishimura, the President of Solectron Corporation (a 1991 and 1997 Baldrige Award Recipient for Manufacturing) states,

> The (Baldrige) Criteria are evolving as the leaders of American organizations share their strategies and improve their understanding of the factors that drive excellence. While TQM is an approach that organizations have explored, many have gone on to improve and refine this approach. The non-prescriptiveness of the Criteria encourages organizations to demonstrate improvements and refinements to their processes as a result of organizational-level analysis and sharing (NIST, 2000, p. 8).

Nishimura’s comment about how the Baldrige Criteria assists institutions with improvement efforts is similar to the goals of accreditation. In the October 2001 newsletter from the Accrediting Commission of Community and Junior Colleges, this parallel is cited, “The Commission’s goal is standards that focus on what and how well an institution is doing and on ways in which it may improve itself” (p. 1). Edward Schultz, the CEO and Chairman of Dana Commercial Credit Corporation (the 1996 Baldrige Award Recipient for Service) notes,

> We all do certain things very well. We take pride in those things and continue to improve them, but after time the improvement is only marginal. The Baldrige process forced us to focus on those things we didn’t do very well or thought were previously unnecessary. The process highlighted areas that were totally untapped and caused us to evaluate them. Because there were areas we did not focus on before, the improvement was substantial. As a

> result, Dana Commercial Credit was able to improve the organization across the board (NIST, 2000, p. 11).

Community colleges also need to recognize that there is a need to move beyond the current comfort zone of routine accreditation in order to examine critical processes in greater detail and make more substantive improvements to current operating systems. This need to focus on the weakest areas of the college, where there is a break down in the process, has caused many colleges to turn to the Baldrige Educational Quality Criteria as a means for analyzing and documenting those improvements.

## EDUCATIONAL FOCUS OF THE BALDRIGE QUALITY CRITERIA

Curt Reimann, Director of the National Institute of Standards and Technology (NIST), stated, "We have always regarded the Baldrige Award as primarily a national education program. The award criteria are the centerpiece of the education process as they provide the best way to capture and disseminate lessons learned to a mass audience" (Bernowski and Stratton, 1995, p. 43). Waters (1995) establishes the connection between quality principles applied in the private sector and continuous improvement of processes in colleges stating, "Higher education can use these companies as models to design a quality program to fit its unique character" (p. 34). Hertz (1998) adds, "The criteria will help education organizations improve performance and will facilitate communication and sharing of best practices. The Baldrige performance excellence criteria broadly define the practices that any organization, not just business, need to achieve excellence" (p.

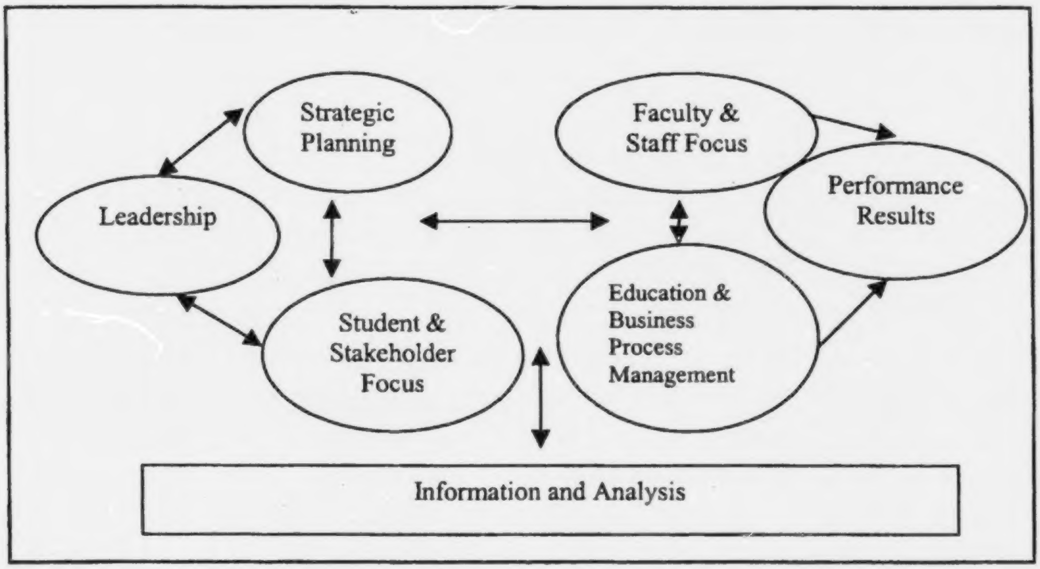
1). Hertz (1998, February 9) concludes by clarifying, "They (the Baldrige Criteria) focus on all aspects of organizational performance, not just on the methods that an organization should use to seek improved results" (p. 1).

Peterson (1993) echoes Reimann's and Water's views, "Although the attraction of TQM for business and industry comes from the positive relationship now proven to exist between product quality and profitability, it is also apparent that the basic tenets of this concept are applicable to non-profit organizations" (p. 2). Peterson's observation is correct. Many educational institutions have been infusing quality principles into their organizations for years. Since the mid 1990s, more attention has been given to the applicability of quality principles to the educational sector and specifically to the community college setting. Rio Salado Community College President Linda Thor (1994) noted, "The educational system has finally begun to take up the challenge to meet the demands of a dynamic and fast-changing corporate system, competing in a global marketplace that has no mercy for industrial mistakes or product shortcomings" (p. 360). Most community college leaders would concur that their institutions can no longer rest on their laurels, but must become more agile like the business sector. Many of these leaders are incorporating quality methods as a means of remaining competitive and to improve the quality of their organizations.

Every community college's quality management system evolves in its own unique way to meet its own specific needs. Thor (1994) explains, "Total quality management (TQM) is an organizational system that can significantly change the methods by which educational institutions deliver services to students and the community. TQM, however, requires a strong commitment by organizational leadership as well as the training and empowerment of employees at all organizational levels" (p. 359). Marchese (1993) adds, "In TQM, 85 percent of the problems that arise in the course of work are attributable to the organization's systems, just 15 percent to the shortcomings of individual employees" (p. 7).

Mark Graham Brown (1998) defines a system as "a series of processes that are followed sequentially to achieve a desired result. Each of the major components of a system has inputs, processes, outputs of results, and ideally, feedback loops" (p. 8). The seven Baldrige Educational Quality Criteria Categories focus on the measurement of performance and target opportunities for improvement. These categories work together as a system to encompass almost everything that impacts the operating of a successful organization. The system of integrated components (Figure 3) of the Baldrige Criteria for Education Framework is based on the following seven categories:

- 1.0 Leadership,
- 2.0 Strategic and Operational Planning,
- 3.0 Student and Stakeholder Focus,
- 4.0 Information and Analysis,
- 5.0 Human Resource Development and Management,
- 6.0 Educational and Business Process Management, and
- 7.0 College Performance Results.


Strategic Planning
Faculty & Staff Focus
Performance Results
Leadership
Student & Stakeholder Focus
Education & Business Process Management
Information and Analysis

(NIST, 2001)
Figure 3. Baldrige Educational Quality Criteria

Brown (1998) states, "the learning of customers' wants and needs is the inputs (3.0 Student and Stakeholder Focus). On the basis of this input, the leadership (1.0 Leadership) sets the direction of the company (or college) and defines its mission, values, products, and/or services" (p. 8). After the direction of the college has been established, the college then must determine "… its overall strategy for success (2.0 Strategic and Operational Planning), identify performance metrics (4.0 Information and Analysis), and set goals for improvement. Once measures and plans have been developed, the college designs systems and processes for its staff (5.0 Human Resource Development and Management), its customers (3.0 Student and Stakeholder Focus), and its major work processes (6.0 Educational and Business Process Management). These systems should in turn produce measurable results such as student satisfaction, staff satisfaction, graduation rates, transfer rates, job placement rates, etc. (7.0 College Performance Results). Every item in the Baldrige criteria that asks about approaches and the implementation of approaches also asks about built-in feedback loops and continuous improvement" (p. 9).

Because Baldrige is specifically designed to improve quality and productivity, the Baldrige Educational Quality Criteria categories focus on the elements of approach, deployment, and results to reveal quality improvements. The link between an organization's approaches to its deployment of those elements, and the corresponding results, provides a clear indication of the strength of an organization's systems and processes.

Baldrige provides an aligned approach to organizational performance and performance management that results in delivering value to students, improving organizational effectiveness, and increasing organizational and personal learning for faculty and staff. The Baldrige criteria focuses on issues at a deeper level and asks the questions "How well do our processes function?" and "How are we using our data to improve processes and outcomes?" These are tough questions and are quite different from the more traditional compliance oriented questions typically found in an accreditation self-study. Because of the subtle nuances of some of the Baldrige based questions, it is more challenging for staff to understand and apply the criteria. It clearly takes practice and concentrated time analyzing the questions and carefully reviewing current college processes to grasp Baldrige.

Daniel T. Seymour (1996) clarifies, "What is critical to the Baldrige Award is a set of well-defined and well-designed processes that are capable of improving the performance of an organization along a set of measures that reflect the aims of the organization" (p. 60). This connection linking a college's mission, vision, values, and goals with all of the processes within the institution lends meaning, direction, and focus to every organizational action.

As an example, a report from The California Higher Education Policy Center titled By Design or Default? (Callan & Finney, 1993) addresses issues of quality in higher education by noting that "questions about quality in higher education get at the 'business of the business.' For the past 30 years, definitions of quality in colleges and universities have been linked with resources (endowment, library holdings, faculty 'superstars,' federal grant dollars, etc.) and reputation" (p. 7). These institutional resources tout attributes of colleges but grossly overlook how these elements are integrated into other campus processes to produce measurable results (as Baldrige requires).

Some of the questions that Callan and Finney (1993) ask are: "What should college-educated students know and be able to do? What are the appropriate outcomes of college? Are decisions about higher education weighted in favor of the 'providers' – that is administrators, staff and faculty – as opposed to student and public needs? In what ways can the curriculum be restructured to educate students more effectively? Has the curriculum shifted from 'student-focused' to 'professor-focused?'" (p. 7-8). These are all probing and very legitimate questions to pose.

These broad questions also prompt colleges to focus on the institution-wide, systematic processes that address these issues rather than on specific, silo-based organizational elements.

In 1997, Marilyn J. Richardson conducted a study titled "Total Quality Management and the Belief Systems of Higher Education Administrators." She discovered a continuing need to address "… TQM's suitability for higher education versus its suitability for industry. Currently, the debate centers on differences between higher education and industry in terms of environment and process" (p. 52). Although Richardson's study focused on the perceptions of baccalaureate level college administrators compared with perceptions of business leaders (bankers) of the applicability of TQM principles, she encourages further study of quality applications in other segments of higher education to determine proven strategies for implementation as well as how her study's results might differ from those populations with proven records of TQM success.

In his book, Management Fads in Higher Education, Robert Birnbaum (2000) voices criticism for TQM/CQI as the ultimate panacea as perceived by business and higher education. He explains quality management as a fad that cannot withstand the test of time because it could never be implemented and embraced in a college setting. He does acknowledge, "TQM involves cultural changes in the basic mind-set and values of the organization, and probably requires at least five to seven years to implement fully" (Birnbaum, 2000, p. 105).

Finally, Marchese (1993) focuses on how the staff in an organization respond and react to quality efforts. At times, the greatest challenge can be the acceptance of quality principles throughout an organization. Marchese states, "At a deeper level, the barriers are cultural, attitudinal, and political" (p. 7). He continues, "… organizations should be driven by the intrinsic motivation in all of us to do our best work" (Marchese, 1993, p. 7). One of the key goals of this research study is to identify some of the most common barriers as revealed through questionnaire feedback from community college leaders.

## COMMUNITY COLLEGES THAT HAVE USED QUALITY PRINCIPLES

A few of the pioneer community colleges that began to infuse quality principles into their organizations nearly a decade ago include: Cowley Community College in Kansas, Delaware County Community College District in Delaware, Fox Valley Technical College in Wisconsin; Hutchinson Community College in Kansas, Johnson County Community College in Kansas, Mt. San Antonio College in California, Richland College in Texas, and Rochester Technical Institute in Minnesota. For example, Johnson County Community College utilized quality concepts to improve campus processes, to broaden participation, and to foster student success.

Charles J. Carlsen and Dan Radakovich (1999) remark, "Who could argue with the value of quality, with the notion that those who actually do the work can best suggest ways to improve processes, or with the concept that decisions should be based on good data? Leaders [at Johnson County Community College] were convinced that adopting the principles of TQM would get the results the college was seeking" (p. 1). Although these colleges have a significant history and considerable experience with quality principles, they are all at vastly different stages of implementation in the quality journey.

Casolara's (1996) research on the applicability of continuous quality improvement principles to three specific community colleges in New York state cited nine actions to assist community colleges with adopting an environment of continuous quality improvement. These actions include:

- "determining the skills necessary for student success,
- implementing methods for monitoring student progress,
- matching student skills with the needs of business and industry,
- allowing students to complete evaluations of faculty prior to drop dates,
- providing faculty evaluation feedback gathered from students to instructors,
- using external personnel to evaluate faculty,
- cultivating alliances with feeder high schools,
- collating skills achieved from one course to other courses, and
- instituting measures for gathering input on planning and goal setting from all campus constituencies" (p. 153-154).

Casolara's recommendations address critical aspects of student success, employee performance measures, partnership development, and institutional strategic planning. His case study approach had a very specific focus on three particular New York community colleges. Additional research that builds upon

Casolara's findings may reveal commonalities beyond those community colleges in New York alone and be applicable to other community colleges nationwide.

In his study titled "Applicability of the Premises of the Malcolm Baldrige National Quality Award Framework to Assessments of Community College Effectiveness, Millan (1997) surveyed 246 community college administrators from 64 colleges regarding the expected practices of organizations that receive the MBNQA. The focus and methodology of his study closely aligns with characteristics of this study. One of the key findings of Millan's study (1997) was that "according to the opinion of a sample of top community college administrators, the Malcolm Baldrige National Quality Award Framework can be utilized to assess community college effectiveness. The study's 24 statements clearly reflect, in different degrees, not only important practices for assessments of community college effectiveness, but also actual practices at community colleges where the survey was conducted" (p. 74).

Furthermore, in his study's concluding sentence, Millan (1997) remarks that "what makes the MBNQA Framework more powerful is twofold: (a) it takes into account the traditional approaches to institutional effectiveness, and (b) it can be combined with Cameron and Whetten's (1983) guiding questions [From whose perspective is effectiveness being judged? On what domain of activity is the judgment focused? What level of analysis is being used? What is the purpose of judging effectiveness?] to create an appropriate framework to assess effectiveness in a particular community college" (p. 80). Therefore, the Baldrige Educational

Quality Criteria are a feasible model for institutional planning and measuring success.

Finally, in studies conducted by Zagorski (1994) and Liu (1999) which focused on the perceptions of community college Chief Instructional Officers, the researchers strongly recommended that community colleges adapt Continuous Quality Improvement (CQI) principles to every aspect of their operations. Zagorski (1994) contends, "Unless the community colleges make a paradigm shift to a new way of providing programs and services, they will rapidly lose their effectiveness" (p. 131). He concludes his study by encouraging further research by comparing "… colleges that are involved with CQI, relative to their success and failures. This type of study would provide valuable information to those colleges contemplating a paradigm shift in the way they conduct their business" (Zagorski, 1994, p. 133). He (1994) adds, "An in-depth comparison of the implementation of various CQI models in community colleges would be interesting and valuable to colleges searching for a model to adopt or adapt" (p. 133).

Although these researchers documented and analyzed the use of quality principles in community college settings, little research can be found on using Baldrige Educational Quality Criteria as a replacement for accreditation standards. This void in the research provides a compelling reason for investigating the issue further. "Simple as the concept seems, the embrace of 'continuous improvement' as an organizational imperative has profound consequences: to reach ever higher performance levels every year out, an organization needs to think systematically about the constant improvement of all processes that deliver value to its customers …" (Marchese, 1993, p. 5). Marchese's statement gives cause to examine the challenges community colleges encounter when attempting to use the Baldrige Educational Quality Criteria as a replacement for traditional accreditation standards.

## SUMMARY

This chapter has elaborated on literature which focused on the issues of assessment and productivity including the deterioration of public confidence and accountability for funds and student achievement, the organizational structure of community colleges in silos versus systems, an overview of the regional accreditation systems in the United States, an overview of Baldrige Education Criteria, and a review of some community colleges that have used the Baldrige Criteria.

This chapter also cited studies that addressed different aspects of institutional effectiveness as well as quality concepts related to community colleges. While these studies provide general information regarding the perceptions of community college leaders on quality issues, none compared the usefulness of Baldrige Quality Criteria as a substitution for regional accreditation standards. Chapter III delineates the methodology of this study with the specific focus of determining the reactions of community college leaders regarding the use of Baldrige Educational Quality Criteria for improving processes and measuring success as compared with those who apply regional accreditation standards. The challenges and opportunities related to the use of Baldrige as a replacement for accreditation were also studied.

# DESIGN OF THE STUDY

## OVERVIEW

The methodology for this study had its foundation in a comprehensive review of accreditation issues and the literature related to the history of Total Quality Management (TQM), Continuous Quality Improvement (CQI), and Baldrige Educational Quality Criteria. Current research in the field of education and quality principles was also gathered and thoroughly reviewed.

The literature on quality principles conveys the benefits of these concepts as they apply to business, health care, and educational settings. The Baldrige Educational Quality Criteria emphasize the value of data-driven decisions, the importance of analyzing entire systems and processes, and the necessity to link student and stakeholder input with the goals of the college.

This descriptive study used an original survey instrument designed by the researcher to examine the key aspect of Baldrige Educational Quality Criteria as they relate to institutional planning in community colleges. Gall, Borg, and Gall (1996) define the descriptive research method as "the most basic of quantitative research methods" (p. 373). In addition, this study also gathered feedback from community college leaders across the United States regarding the benefits and challenges of using Baldrige Educational Quality Criteria as another model for accreditation.

## METHODOLOGY AND RATIONALE

Chapter III identifies the participants targeted for the research study and provides the rationale for how and why these individuals were selected. This chapter also delineates the research tools that were used to gather information from the participants and to classify their input. The procedures that were employed for collecting and analyzing the data are then reviewed. Finally, this chapter concludes with a description of strategies used to protect the anonymity of human subjects in this study.

Very few research surveys have been conducted on this topic with a specific focus on community colleges. The interest in Baldrige Educational Quality Criteria and its applications to American community colleges is increasing rapidly. This issue has been addressed in several recent conference presentations, profiled in newspaper and journal articles, and discussed during accreditation association meetings. Therefore, the results of this research study directly contribute to the literature base and breadth of information available on this topic and also provide American community colleges with critical information related to the adaptation of these principles in their organizational settings.

Quantitative and qualitative research methodologies were used to obtain measurable data that were analyzed statistically as well as subjective data that provided candid advice and input from community college leaders engaged in infusing quality principles at their institutions. This approach is both consistent with the researcher's epistemology as well as the critical components of Baldrige that emphasize institutional effectiveness measures, elements of accountability, data-driven decisions, and quantifiable results.

The hypothesis for this study was that the use of Baldrige Educational Quality Criteria provides community college leaders and other external evaluators with richer, more meaningful data for organizational improvement, more comprehensive information about the institution, and a better means for illustrating clear connections between campus systems and processes.

This study was guided by the following research questions:

**Research Question One:** How do community college leaders who use Baldrige Educational Quality Criteria address institutional planning and measurements of success based on the level of value and practice of quality principles at their institution?

**Research Question Two:** What are the benefits and challenges for community colleges using the Baldrige Educational Quality Criteria?

## RESEARCHER PREPARATION

The researcher had adequate preparation for this study. Over a ten-year period the researcher gained a thorough understanding of quality principles, tools, and techniques from Total Quality Management and Continuous Quality Improvement. In addition, the researcher completed a comprehensive three-day training session based on the Baldrige Educational Quality Criteria and edited a Baldrige-based quality application for the community college where she is employed.

The researcher has also served as the Accreditation Liaison Officer for her community college for the past six years. The researcher has attended regional accreditation training/preparation sessions, served on two community college accreditation visitation teams, and edited the accreditation self-study report for her institution.

## PARTICIPANTS

In this study, the researcher believed that the size of the community college and the geographical location of the campus did not adversely affect the sampling because college size and location were unrelated to the study topic of using Baldrige Educational Quality Criteria for institutional planning and measurement of success.

The survey sample included the highest ranking administrative leaders from a broad range of community colleges across the nation. The study participants were selected from community colleges that were members of the Continuous Quality Improvement Network (CQIN) and/or were participants in the Academic Quality Improvement Project (AQIP) sponsored by the Higher Learning Commission of the North Central Association of Colleges and Schools. The participants were all familiar with quality tools and principles. A total of 34 community colleges representing 15 states comprised the sample.

A letter of introduction from the researcher (see a sample letter in Appendix A) as well as a letter of support from the Higher Learning Commission of the North Central Association (see a sample letter in Appendix B) was mailed to the sample of 204 community college leaders. The letters were sent to six key leaders at the 34 community colleges: the College President, the Chief Academic Officer, the Chief Student Services Officer, the Chief Financial Officer, the Institutional Researcher, and the Accreditation Liaison Officer. Following dissemination of the letters, the researcher received telephone calls from two community colleges indicating that the position for the administrative leader targeted for the study was vacant. Thus, the total number of potential respondents was 202.

A message about the questionnaire and the reason for the research was sent to every member of the survey sample via electronic mail (email) with an embedded link to the web-based Baldrige/Institutional Effectiveness Questionnaire. Based on this emailed communication, a 30% response rate (65 responses) was achieved. A reminder email message was sent to the survey participants two weeks following the initial email communication. The reminder email message also included an embedded link to the web-based Baldrige/Institutional Effectiveness Questionnaire. Based on this reminder email, a 45% response rate (92 responses) was achieved.

Finally, the researcher sent follow-up postcards (see a sample postcard in Appendix C) to study participants as a final reminder about the questionnaire. Based on this postcard reminder, a 52.5 % response rate (106 responses) was achieved. This return rate was sufficient for a valid sample. Of the 106 responses, a total of 95 submissions were made through the web-based response method and 11 were submitted in hard copy form (based on specific requests to have this format sent to particular respondents).

## INSTRUMENTATION AND MATERIALS

The design of this study used a questionnaire to "… produce statistics -- that is, quantitative or numerical descriptions of some aspects of the study population" (Fowler, 1984, p. 9). A questionnaire was the preferred form of data collection for this study because of advantages of questionnaire design such as economy of design, rapid turnaround in data collection, and the ability to identify attributes of a population from a small group of individuals (Sudman and Bradburn, 1982; Fink and Kosecoff, 1985; and Creswell, 1994). The effect of subjective bias was minimized by the use of a structured, 50 closed-item questionnaire (see the Baldrige/Institutional Effectiveness Questionnaire in Appendix D) along with six open-ended questions followed by ten additional demographic questions developed by the researcher and based on the research questions for this study.

Based on the study's emphasis on how quality principles in general and the Baldrige Educational Quality Criteria in particular could serve as a beneficial model for meeting institutional accreditation needs, the Baldrige/Institutional Effectiveness Questionnaire was developed. This unique web-based questionnaire included 25 statements based on the Baldrige Educational Quality Criteria categories formatted with dual scales titled "Value" and "Practice." Using the dual scale method, there was a potential of 50 responses per survey respondent.

One scale was termed "Value" in an effort to assess community college leaders' perceptions of how highly each quality concept is valued by their institution. If a quality element is viewed as important by a college (as perceived by the leaders at that institution), then it is more likely that this quality element will be emphasized, developed, and nurtured at the institution. The Value Scale was defined as "How much does your institution value this?" and included a total of four choices ranging from "Values this a great deal" to "Does not value this at all" on the extremes with an additional choice of "Does not apply." The ranking for the Value Scale ("How much does your institution value this?") listed the following:

0 = Does not apply
1 = Does not value at all
2 = Of little value
3 = Values this somewhat
4 = Values this a great deal

The second scale was designed to query the community college leaders about the level of "Practice" of each quality component at their particular institution. The Practice Scale assessed the level of implementation of each element at the community colleges surveyed. The premise was that the wider the differences between the scores on the Value versus the Practice Scale, the greater the gap an institution faces in reconciling the importance and the application of Baldrige Educational Quality Criteria at the college. The Practice Scale was defined as "How well does your institution practice this?" with a corresponding four-choice scale with choices ranging from "Always practices this" to "Does not practice at all" on the extremes with an additional choice of "Does not apply." The ranking for the Practice Scale ("How well does the institution practice this?") listed the following choices:

0 = Does not apply
1 = Does not practice this at all
2 = Rarely practices this
3 = Usually practices this
4 = Always practices this

The questionnaire included items derived from the Baldrige Educational Quality Criteria and were clustered under seven category titles corresponding to Baldrige. The seven categories included: I. College Leadership. II. Strategic Planning, III. Students and Stakeholders, IV. Information and Analysis, V. Human Resources Development, VI. Educational Programs and Processes, and VII. Business Process Management. In the Baldrige Educational Quality Criteria, the sixth category is titled Educational and Support Process Management which includes Business Processes. The researcher divided this broad Baldrige category into two separate categories on the questionnaire. This was done to clearly distinguish between questions addressing educational design and delivery compared to educational support processes specifically addressing the business operations of the college. The Baldrige Criteria also includes a category titled Organizational Performance Results. This category was not included in this study's questionnaire because its primary emphasis (for those institutions applying for the Baldrige Award) is on reporting results and demonstration of performance excellence. The researcher determined that the 25 questions separated into the seven categories on the questionnaire would most directly assess the perceptions of community college leaders and yield sufficient data for the study.

Fowler (1984) states, "The survey is designed to elicit insight into the degree to which the premises of the model reflect current, actual practice at community colleges, as perceived by the respondents" (p. 12). In addition, the questionnaire contained a section consisting of six questions designed to obtain qualitative feedback from these community college leaders related to their experiences with infusing quality principles on their campus. Lastly, ten general demographic questions elicited descriptive information about each respondent. As Fowler (1984) notes, "… a main reason for surveys is to collect information that is available from no other source" (p. 12). In his book, Research Design: Qualitative and Quantitative Approaches, Creswell (1994) cites Babbie (1990) when he states, "The purpose of survey research 'is to generalize from a sample to a population so that inferences can be made about some characteristic, attitude, or behavior of this population'" (p. 118). Finally, Fink (1995) adds, "The best survey information systems have these six features: specific, measurable objectives; sound research design; sound choice of population or sample; reliable and valid instruments; appropriate analysis; and accurate reporting of survey results" (p. 1).

## CONTENT VALIDITY

The content validity for the research instrument was established through careful review by and feedback from four individuals whose professional responsibilities were directly associated with Baldrige Educational Quality Criteria. These experts in the field of quality principles were not included as participants in the larger survey group. These field experts reviewed the questionnaire and commented on the items in relation to the research questions. Each field expert was sent a letter requesting his or her participation, an explanation of the study, a copy of the questionnaire, and a validation form on which to record responses. The four individuals were asked their perceptions regarding the clarity of the questionnaire items and the terminology used throughout the instrument. Based on the feedback from the field experts, modifications to the questionnaire were made by the researcher. In addition to the field expert review that established content validity, a factor analysis was later conducted to verify the construct validity of the questionnaire.

## FACE VALIDITY

The questionnaire used in this study was pilot-tested by five community college leaders who all had experience with Baldrige Educational Quality Criteria. These community college leaders were excluded from the survey sample. Sonquist and Dunkelburg (1977) explain,

> a small-scale survey gives the researcher an advance opportunity to see failures in question design; to see if questions appear to measure what one wishes to measure; to see if the codes designed

> as rules for categorizing the data and transferring them from the questionnaire to machine-readable storage medium are properly designed; to find out whether the questionnaire is too long, or too short; to ascertain whether or not questions have an optimal ordering; and to locate technical mistakes made in layout or inadequate directions in the instrument (p. 7).

The pilot test was conducted to ascertain whether the community college leaders comprehended the questionnaire instructions, whether the questions were objective and clearly understood, and whether the questions elicited the information necessary for the study. Based on the feedback from the pilot study members, elements of the questionnaire were refined. All of the pilot study members completed the questionnaire within 27 minutes. The pilot test was a critical measure in establishing "the face validity of the instrument and improving the survey questions" (Creswell, 1994, p. 121).

## RELIABILITY

Fink (1995) states, "The aim (of a survey) is to produce reliable and valid data. Reliable data are the result of consistent responses over time and between and among observers and respondents. Valid data come from surveys that measure what they purport to measure" (p. 5). The information elicited from the questionnaires indicated the reliability of the research data. The use of Cronbach's Alpha (or coefficient alpha) was one method to measure internal consistency (reliability) of the research questionnaire data.

## DATA COLLECTION PLAN

The method of data collection for the research participants was to send a letter of introduction/consent along with a letter of support from the Higher Learning Commission via United States mail in early January 2002. The letter of introduction apprised participants of the research study and notified them that they would receive the web-based questionnaire via an email message sent to them in mid January with the Universal Resource Locator (URL or web address) link to the questionnaire embedded in the message. The refined research instrument (revised based on field expert and pilot study feedback) was distributed via email directly to 202 community college leaders representing 34 community colleges from 15 different states. These 202 community college leaders were all familiar with quality principles and use the quality criteria at some level on their campuses.

Respondents from the survey group were asked to return the completed questionnaires immediately via the email link. In addition, the initial email message with the link to the web-based questionnaire explained that upon request, a hard copy version of the questionnaire and a postage-paid return envelope could be sent to any study participant who preferred to receive a hard copy of the survey instrument. Any returned hard copy questionnaires sent to those upon request were separated from the envelope to assure each respondent's anonymity.

The web-based questionnaire proved to be an efficient method that provided instant responses and was more conducive to data collection and analysis. The compilation and synthesis of the open-ended questions also proved more efficient because the responses were submitted electronically and did not necessitate typing into the computer. This electronic transmission of the responses reduced the potential for data entry error. On page 2 of his article titled "Conducting Web-Based Surveys," David J. Solomon (2001) references research by Medin, Roy, and Ann who compared world wide web surveys with mail surveys. He states, "The interest in web-based surveying is not surprising as it offers a number of distinct advantages over more traditional mail and phone techniques. Examples include reducing the time and cost of conducting a survey and avoiding the often error prone and tedious task of data entry."

Solomon (2001) further explains, "Several factors have been found to increase response rates (of web-based surveys) including personalized email cover letters, follow-up reminders, pre-notification of the intent to survey and simpler formats" (p. 1). This electronic method of questionnaire distribution was also appropriate given the current climate across the country related to sensitivity and concerns about security of traditional mail dissemination.

To address concerns regarding low response rates associated with some web-based questionnaires, the researcher noted that this particular survey sample was comprised of individuals who were all likely to be proficient with computers, who were familiar with email and web searches, and who welcomed efficient means for responding to inquiries. To encourage a high response rate, a follow-up email reminder with the link to the web-based questionnaire was sent two weeks following the initial electronic transmission of the questionnaire to all participants.

One week after the email reminders were sent, a postcard was mailed via U.S. mail to study participants as a final means to encourage their submission of the web-based questionnaire. The follow-up postcards thanked those who had already responded and also included a statement to encourage others to complete the web-based questionnaire and return it if they have not already done so. The postcards also encouraged participants to contact the researcher to request another transmission of the questionnaire if they did not receive the initial one. Fink (1995) supports the need to send three to four follow-ups in order to increase survey response rates (p. 154).

When questionnaires were returned via the web-based method, the participant's anonymity was preserved because the survey participant was only able to access an independent web site that did not have an identifier associated with the individual who completed the survey instrument. Once collected, the questionnaire data from the sample group was reviewed and analyzed by the researcher. Responses were entered into a Statistical Package for the Social Sciences (SPSS) Version 10.1 database for analysis. The rough guideline suggested by Denscombe (1998) is that typically twenty percent of questionnaires are returned.

## DATA ANALYSIS PLAN

A quantitative analysis was employed using data from the four point Likert scale on the survey. Absolute frequencies (numbers) as well as relative frequencies (in the form of percentages) were reported for each question. Each question was issued a numeric value from one to four according to the response given.

Responses of "Values this a great deal" on the Value Scale and "Always practices this" on the Practice Scale received a point value of four whereas the responses of "Does not value at all" on the Value Scale and "Does not practice this at all" on the Practice Scale received a point value of one. All other responses were issued point values related to their position on the questionnaire. Responses of "Does not apply" received a point value of zero on both scales.

The statistical analyses for this study included a thorough review of descriptive statistics, a calculation of the number of returns and non-returns of the questionnaire, and an analysis of data correlated by comparative scale (Value and Practice). The analyses also included the comparison of mean scores, the use of r-square values to calculate the coefficient of determination, and the completion of significance tests to determine the differences between the level of "Value" and "Practice" elicited from the questionnaire responses. Leedy (1997) explains, "The descriptive survey measures the characteristics of a sample at one point in time" (p. 189).

In addition, the open-ended questions that provided qualitative responses were also reviewed and analyzed. The six open-ended questions were assessed using a "primarily inductive process of organizing data into categories and identifying patterns (relationships) among categories" (Mc Millian and Schumacher, 1993, p. 472). The qualitative responses to the open-ended questions provided the researcher with more detailed information on quality criteria from the respondents. The responses to these questions were categorized and grouped according to similar responses. Patterns of responses were identified and analyzed. The quantitative as well as the qualitative data are reported in Chapter IV.

## STRATEGIES TO ENSURE SOUNDNESS OF DATA, DATA ANALYSIS, AND INTERPRETATION

Authentic engagement with leaders from the sample colleges was a key factor in this study. The questionnaire construction was based on review of survey development techniques cited in Bradburn, Sudman, and Associates (1979); Converse and Presser (1986); Fink and Kosecoff (1985); Fowler (1984); Fowler (1995); Leedy (1997); and Sudman and Bradburn (1982). The soundness of data was ensured by following survey construction methods and data collection techniques cited by these authors. The data analysis was conducted by following Fink and Kosecoff (1985), Gall, Gall, and Borg (1999), and Huck (2000) on proper analysis techniques.

Survey experts agree that a questionnaire is limited by the questions posed. If used in isolation, the purely quantitative research questions could miss some of the more critical input possibly leading to incomplete results. Therefore, the six qualitative, open-ended questions provided an opportunity to gather additional input and valuable insight from the community college leaders in the survey sample.

## STRATEGIES FOR PROTECTION OF HUMAN SUBJECTS

Study participants received letters of introduction from the researcher that outlined the intent of the study and provided background on the researcher. These letters served as a means of informed consent for the participants. The letter of introduction from the researcher clarified the role of the participant in the study and reinforced the researcher's intent to fully protect the confidentiality of each participant. In addition, the researcher followed standard research protocol by obtaining approval for this research study from the Oregon State University Human Subjects Committee (Internal Review Board) in advance of any data collection.

The participants in this study were protected using several specific means. The information obtained through the research gathered in this study was only disclosed in aggregate form in order to ensure participant confidentiality and to protect the identity of individuals. The researcher maintained all information related to this study in a physically secure location. Access to this information was restricted to the researcher. The researcher also destroyed all records linking individual identities to the data collected to ensure anonymity.

# FINDINGS AND RESULTS

## INTRODUCTION

This chapter presents the findings of the study as it relates to the questions being investigated and the hypothesis derived from the research questions. The data from the questionnaires sent to community college leaders throughout the nation were analyzed for descriptive data, statistical significance, comparative information, and trends related to the value, practice, and applicability of Baldrige Educational Quality Criteria in community colleges. Quantitative, qualitative, and demographic information was gathered through the research process.

## FINDINGS

### Demographic profile of participants and their colleges

The demographic profiles of the individuals who responded to the questionnaire included: 21 from Presidents/CEOs (62% of the total number of surveys distributed to Presidents/CEOs); 23 from Chief Academic Officers (68% of the total distributed to Chief Academic Officers); 11 from Chief Financial Officers (32% of the total distributed to Chief Financial Officers); and 14 from Chief Student Services Officers (41% of the total distributed to Chief Student Services Officers). In addition, responses were received from three Accreditation Liaison Officers, 11 Institutional Researchers, three Staff Development Officers, and 20 "Other" position titles such as Deans, Directors of Institutional Effectiveness, Directors of CQI, Directors of Enrollment Management, etc. The individuals who selected the "Other" category did not feel that the position titles provided on the questionnaire accurately described their particular position and therefore opted to type in their exact title in the "Other" category. A pie chart of the percent of study respondents by title is illustrated in Figure 3.

The other demographic questions on the survey provided data regarding the level of involvement the respondents have in the Baldrige/quality process on their campus, how long they have held their current position at the college, their gender, a description of their college based on student headcount and general location (urban, suburban, or rural), when their institution's most recent accreditation occurred, whether they were involved with the most recent accreditation, whether their institution has applied for a state or national quality award, and whether they were involved with preparing the application for the quality award. The ten demographic questions yielded information depicted in the following tables and figures.

| **Demographic Question #1** | **Responses** (number of respondents and percent) |
|---|---|
| What is your level of involvement in the Baldrige/quality process on your campus? | Very little = 6 respondents (5.7%)<br>Little = 5 respondents (4.7%)<br>Some = 19 respondents (17.9%)<br>Major = 75 respondents (70.8%)<br>No response = 1 (0.9%) |

Figure 4. Level of Involvement in Quality Processes

The vast majority of the community college leaders in the survey sample indicated that they are heavily involved with quality efforts at their college. This high level of involvement lends additional credibility to their questionnaire responses due to their familiarity with the research topic. This level of involvement statistic also links with the qualitative comments that underscore the importance of community college leaders maintaining high involvement in quality efforts in order for these efforts to succeed in community colleges.

Figure 5 illustrates the results of demographic question #2 that asked respondents to indicate the title of the position they hold at their community college.

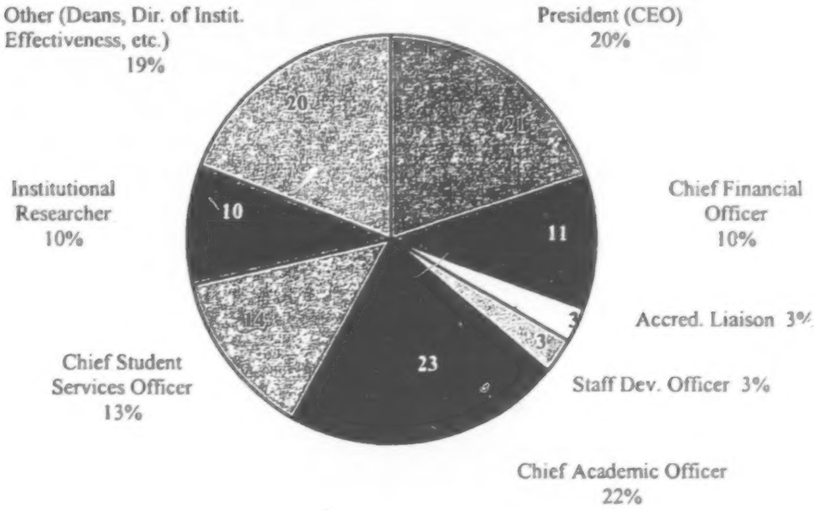


Figure 5. Respondents by Title.

A majority of the respondents represented upper management levels in community colleges: President/CEO, Chief Academic Officer, Chief Financial Officer, and Chief Student Services Officer. These upper management respondents represented 65% of the total respondents to the questionnaire. The remaining 35%

of respondents represented a variety of categories including: Staff Development Officer, Institutional Researcher, Accreditation Liaison Officer, and Other titles. The "Other" response option also permitted respondents to type the title of their position. Some of the titles that were added were: Director of Institutional Effectiveness, Vice President of Institutional Effectiveness, Director of Institutional Advancement, Dean, Director of Planning, Quality Liaison, and Faculty Leader. Although the original electronic mail transmission of the questionnaire was sent to the six top level administrators at each college, the responses indicate that some top level administrators might have forwarded the questionnaire to an individual on their campus whom they perceived as being more familiar with quality principles.

The third demographic question asked respondents to indicate their tenure in their current position at their community college (Figure 6).

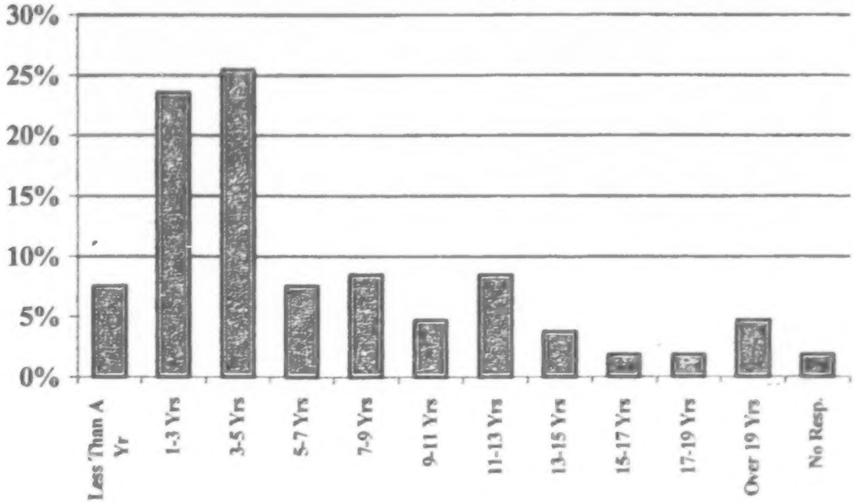


Figure 6. Length of Time in Current Position.

Sixty of the 106 respondents (57% of the total respondents) have held their current position under five years. Due to the typical tenure of three to five years for community college leaders in a single position, this statistic may not be unusual. It is interesting to note that there were also 22 respondents who indicated that they had held the same position at their college for 11 years or more. In fact, five of the respondents have occupied the same position at their institution for over 19 years!

Question #4 in the demographic section of the questionnaire related to gender. The pie chart in Figure 7 depicts the gender distribution.

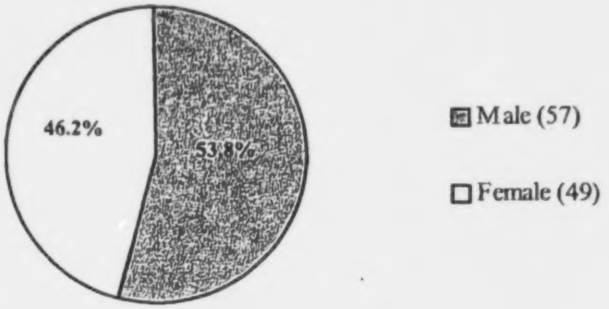


Figure 7. Gender Distribution

The fairly even distribution of males to females in the survey sample indicates the changing profile of community college leaders. Only a few decades ago, the majority of community college leaders were male. The more even split from this survey sample illustrates the changing demographics of today's community college leaders.

Figure 8 contains the data gathered from responses to demographic questions #5 and #6 regarding the characteristics of the community colleges surveyed. The figure also includes a column that compares the data from this study with the national data on community colleges.

| **Demographic Questions #5 & #6** | **Responses** (number of responses and percent) | **National Statistics for Community Colleges*** |
|---|---|---|
| 5. Which best describes your community college? | Urban = 35 (33.0% of sample)<br>Suburban = 27 (25.5% of sample)<br>Rural = 43 (40.6% of sample)<br>No response = 1 (0.9%) | Urban = 36.4%<br>Suburban = 28.5%<br>Rural = 34.8% |
| 6. What is the size of your community college based on total headcount? | 1,000 or fewer = 2 (1.9%)<br>1,001–5,000 = 34 (32.1%)<br>5,001-10,000 = 17 (16.0%)<br>10,001-15,000 = 12 (11.3%)<br>15,001-20,000 = 12 (11.3%)<br>More than 20,000 = 27 (25.5%)<br>No response = 2 (1.9%) | 1,000 or fewer = 14.8%<br>1,001–5,000 = 50.9%<br>5,001–10,000 = 20.7%<br>10,001-15,000 = 6.8%<br>15,001-20,000 = 3.6%<br>More than 20,000 = 3.2% |

(* = Shults, 2002)

Figure 8. Profile of Community Colleges

Thus, the community colleges in the survey sample closely paralleled the overall percentage of community colleges represented by location throughout the country. Interestingly, the colleges in the sample are vastly different in size as compared with the national statistics on community colleges by size. The greatest disparity is between the high percentage of colleges in this research study that have over 20,000 students versus the very low national percentage of community colleges with over 20,000 students. At the opposite end of the spectrum, a very limited number of community colleges with small student enrollments were included in this study compared with the national data. Because the colleges in the sample were specifically selected due to their involvement with quality principles, this driving characteristic caused the colleges surveyed to differ in size from the national community college statistics.

The following figure includes a synopsis from the questionnaire respondents related to the most recent accreditation at their institution and their level of involvement in the most recent accreditation.

| Demographic Questions #7 and #8 | Responses |
|---|---|
| 7. How long ago was your most recent institutional accreditation? | Within the last year (2000-01) = 13 (12.3%)<br>Two years ago (1999-00) = 11 (10.4%)<br>Three years ago (1998-99) = 13 (12.3%)<br>Four years ago (1997-98) = 6 (5.7%)<br>Five years ago (1996-97) = 9 (8.5%)<br>Six years ago (1995-96) = 9 (8.5%)<br>Seven years ago (1994-95) = 6 (5.7%)<br>Eight years ago (1993-94) = 11 (10.4%)<br>Nine years ago (1992-93) = 13 (12.3%)<br>Ten years ago (1991-92) = 13 (12.3%)<br>No response = 2 (1.6%) |
| 8. Were you personally involved in your institution's previous accreditation? | Yes = 72 (67.9%)<br>No = 34 (32.1%) |

Figure 9. Recent Accreditation and Involvement

Given the specific focus of this study on Baldrige as another model for accreditation, the data indicating that two-thirds of the respondents were personally involved in their institution's most recent accreditation is important. This high involvement rate supports the presumption that these leaders would be knowledgeable about the accreditation process in their region.

Figures 10 and 11 depict responses to demographic questions #9 and #10 that asked respondents t indicate whether their college had applied for a quality award at the state or national level and whether they were personally involved in completing their institution's application for the quality award.

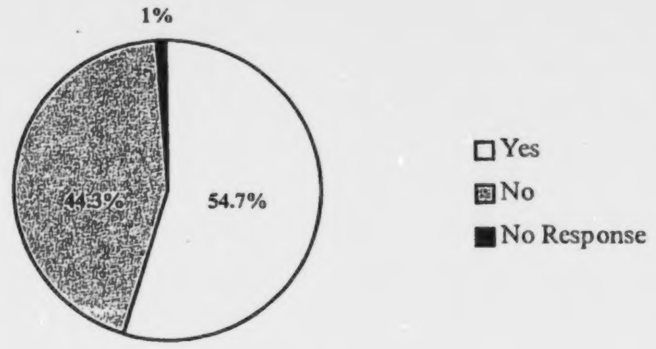


Figure 10. Quality Award Application Completion

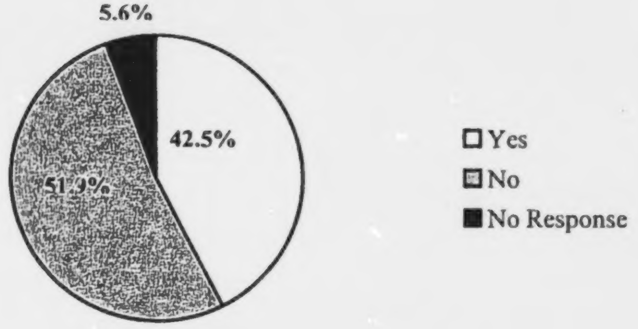


Figure 11. Involvement with Quality Award Application

In comparing the responses between the two pie charts, the respondents indicated that a little more than half of the institutions had applied for a quality award (Figure 10), but the statistics regarding their involvement with the quality application proved to be the reverse (Figure 11). Overall, it appears that approximately half of the institutions surveyed have applied for quality awards and nearly half of the community college leaders on those campuses have assisted with the application. Several of the qualitative responses cited the value of applying for a state quality award as well as having some community college leaders on their campuses undergo examiner training for the state quality award process. The respondents who mentioned the state quality award processes specifically noted that the state quality award process provided their institutions with very specific feedback related to quality efforts and opportunities for improvement that their institutions would not have received otherwise.

Responses to quantitative questions

The means and standard deviations were computed for the individual Value and Practice questionnaire items. The means and the standard deviations were then calculated for each of the totals by Baldrige category area (College Leadership, Strategic Planning, Students and Stakeholder Focus, Information and Analysis, Human Resource Development, Educational Programs and Processes, and Business and Process Management). A gap analysis was conducted to compare the response differences between each specific category for the Value and Practice Scales. The gap analysis was conducted using non-parametric median comparisons. The information in Table 1 below is visually represented in Figure 12.

Table 1. Gap Analysis Using Means for Value and Practice by Category

| | Info & Analysis | Students/ Stakeholders | Strategic Planning | Human Resources | College Leadership | Educ. Prog. | Business Mgmt. |
|---|---|---|---|---|---|---|---|
| Value | 3.79 | 3.78 | 3.77 | 3.73 | 3.69 | 3.67 | 3.47 |
| Practice | 3.30 | 3.24 | 3.22 | 3.25 | 3.02 | 3.29 | 2.81 |
| Difference | -0.49 | -0.54 | -0.55 | -0.47 | -0.68 | -0.38 | -0.66 |

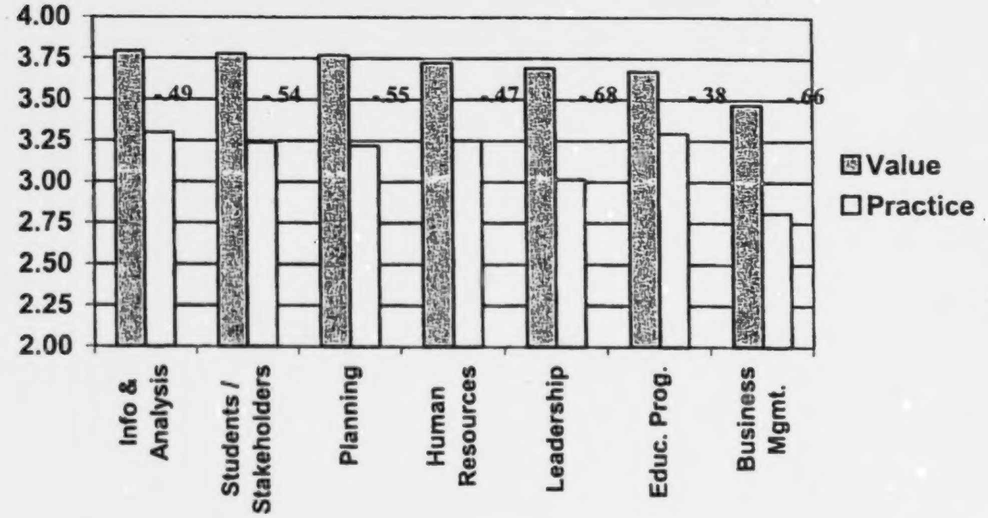


Figure 12. Gap Analysis for Value and Practice by Category.

The gap analysis above shows the variation between each Baldrige category on the questionnaire related to the responses to the Value and Practice Scales. The items on the graph are ranked from left to right by the highest valued category to the least valued. The negative results indicate the disparity between the respondents' perceived practice versus value levels. The most concerning differences are evident in the various category tiers. The distinctions indicated a hierarchy for community colleges.

The most surprising finding is that the largest discrepancy exists between the Leadership as well as Business Management. The respondents did not perceive themselves as practicing College Leadership and Business Management elements as well as they practiced Educational Programs. In fact, Leadership and Business Management were two of the three categories that were among the least valued and definitely the least practiced. Perhaps these two categories were found to be least practiced because they represent more of the ideal of what community college leaders would like to ultimately achieve, but are not achieving. Baldrige emphasizes the need to be a visionary leader and for achieving excellence and efficiency in business practices. This data reveals that the respondents perceive that these two categories are not being practiced as highly as they desire.

The second tier or division in the gap analysis clusters the Planning and Student/Stakeholder Categories. The respondents may have envisioned these two categories as the big picture items for the organization, but not actually being practiced at the level they are valued. The clustering of the Planning and Student/Stakeholder Categories takes a step outside of the daily routine for community college leaders and focuses on what they should do (more planning efforts and maintaining a focus on student/community needs).

The third dividing tier (as indicated by the disparities between value and practice data) includes the Information/Analysis and Human Resources Categories. This division indicates that community college leaders felt that they are attempting to gather data and are managing the human resources aspects of their institutions on a more micro level perhaps because these areas can be perceived as more of the controllable elements of the environment. This may be one reason why community college leaders might have ranked these categories as ones that are practiced at a higher level.

The fourth tier that is evident from the value and practice comparison data includes the Educational Program Category. Emphasis on educational programs has been the foundation and historic focus for community colleges.

### Results of correlations and ANOVAs

Correlations and ANOVAs were conducted to explore the comparative data among demographic items on the questionnaire and to investigate whether a relationship exists between the Value and Practice Scales for the quantitative questions. Twenty-five questions, presented as statements, were clustered under the seven categories of the Baldrige Educational Quality Criteria. Community college leaders in the sample were asked to respond to the statements by utilizing a dual scale of Value and Practice.

The responses to the web-based questionnaires were downloaded onto an Excel spreadsheet. Data from the hard copy questionnaire submissions were hand entered onto this same spreadsheet. Information from the Excel spreadsheet was uploaded into the Statistical Program for the Social Sciences (SPSS 10.1) for data analyses. Single frequencies were run to verify that all the data were entered accurately. Absolute frequencies (numbers) and the relative frequencies (percentages) for each quantitative survey question were also tabulated.

Overall correlations were run to determine if a connection exists between the Value and Practice Scales. The results of the correlations indicated that $r(66) = .50$, $p < .01$. In other words, where $r$ equals the Pearson Correlation symbol, (66) equals the N, .50 is the correlation coefficient, and p < .01 represents the significance.

| **Correlation Coefficient (*r*)** | **Interpretation** | **Coefficient of Determination (*r2*)** |
|---|---|---|
| 1.00 | Perfect positive | 1.00 |
| .80 | Strong positive | .64 |
| .50 | Moderate positive | .25 |
| .20 | Weak positive | .04 |
| .00 | No relationship | .00 |
| -.20 | Weak negative | .04 |
| -.50 | Moderate negative | .25 |
| -.80 | Strong negative | .64 |
| -1.00 | Perfect negative | 1.00 |

(Newton & Rudestam, 1999, p. 264)

Figure 13. Interpreting Bivariate Correlation Coefficients

Based on the Newton and Rudestam's (1999) figure above, the results for this study indicated a moderately positive correlation between how much an organization values an item and how much it is practiced at the community college. Individual correlations were also calculated for each category in the questionnaire based on the Value and Practice Scales. The results of the individual category correlations indicated r([N]) = [stat], p < [sig]. For each category the results of the correlation reveal a significant correlation for every category.

A Pearson Correlation between the Total of the College Leadership Value Scale and Total of the College Leadership Practice Scale showed a positive, significant relationship between these two categories (r = .68). The correlation between the Total of the Strategic Planning Value Scale and Total of the Strategic Planning Practice Scale also showed a positive, significant relationship between these two categories (r = .49). A Pearson Correlation between the Total of the Students and Stakeholders Value Scale and Total of the Students and Stakeholders Practice Scale showed a positive, significant relationship between these two categories (r = .33).

The correlation between the Total of the Information and Analysis Value Scale and Total of the Information and Analysis Practice Scale showed a positive, significant relationship between these two categories (r = .40). A Pearson Correlation between the Total of the Human Resources Value Scale and Total of the Human Resources Practice Scale indicated a positive, significant relationship between these two categories (r = .46). The correlation between the Total of the Educational Programs Value Scale and Total of the Educational Programs Practice Scale revealed a positive, significant relationship between these two categories (r = .36). Finally, the Pearson Correlation between the Total of the Business Management Value Scale and Total of the Business Management Practice Scale showed a positive, significant relationship between these two categories (r = .61).

The variable for the College Leadership Category (.68) and the variable for the Business Management Category (.61) are definitely the highest numerically and are considered to be moderately positive correlations. Although the five other variable categories (Strategic Planning, Students/Stakeholders Focus, Information & Analysis, Human Resources, and Educational Programs) also have high correlations at the 0.01 significance level, the correlations for those variable range from .33 to .49 and are considered to be slight or weak positive correlations. The two weakest correlations are evident in the Students/Stakeholders Focus Category (.33) as well as in the Educational Programs Category (.36).

Additional parametric tests using one-way analyses of variance (ANOVA) were run on the total for each of the scales of the questionnaire. ANOVA tests revealed the mean for each of the scale totals (Value and Practice) were not significantly different based on the position held by community college leaders, types of colleges, or size of the institutions.

## ANALYSIS OF SURVEY INSTRUMENT

Cronbach's Alpha (also known as coefficient alpha or just alpha) was used to measure the internal consistency (reliability) of the survey. Huck (2000) describes the use of Cronbach's Alpha as "… more versatile (as compared to the K-R 20 approach to internal consistency) because it can be used with instruments made up of items that can be scored with three or more possible values" (p. 91-92). The questionnaire in this study included four options per scale (Value and Practice) for respondents to consider. When each component was examined separately to determine if one might be more influential than the other, results showed no significant differences between items and therefore one was not more influential than any other. The alpha reliability coefficient for the Value Scale was a .89 and the reliability coefficient for the Practice Scale was .90 indicating that both scales are statistically sound and highly reliable.

## INDEPENDENT AND DEPENDENT VARIABLES

The independent variables in this study were gender, college size, college description, and position at the college. The demographic questions on the questionnaire produced nominal data for the study. The dependent variables in this study included perception of "Value" and "Practice" related to the use of quality principles at the community college leaders' institutions. Therefore, the study's 50 quantitative questions yielded ordinal data converted to numeric scores.

## RESPONSES TO QUALITATIVE QUESTIONS

The data from the qualitative, open-ended questions were next analyzed for the second research question: What are the potential benefits and challenges for community colleges using the Baldrige Educational Quality Criteria? The six open-ended questions were:

1. How was your institution transformed/changed by using quality criteria? Please cite an example.
2. Are the Baldrige Educational Quality Criteria an equally strong method for quality assurance as compared with traditional accreditation? Why?
3. What are the institutional challenges of using Baldrige Educational Quality Criteria?

4. Why should other institutions consider using Baldrige Educational Quality Criteria?
5. What advice would you give to other community college leaders who are considering the use of quality criteria?
6. How is an institution that is using Baldrige Educational Quality Criteria perceivably different than other community colleges?

The responses to the six open-ended qualitative questions were categorized and clustered according to similar responses. Patterns quickly began to emerge. There were a total of 584 responses (data points) to review (approximately 98 responses for each of the six questions). Questions #1 and #3 (see Tables 12 and 14) most specifically addressed this study's second research question regarding the benefits and challenges of using the Baldrige Criteria. Following [illegible]ch table, there is a specific statement from the responses that serves as a summ[illegible]n.

| **Qualitative Question #1**<br>**How was your institution transformed/changed by using quality criteria?** |
|---|
| "We have been able to focus on three key processes for in-depth analysis and improvement activities. To date, this has been manifested in a re-orientation of our approach to solving problems, in our recognition of the importance of meaningful/useful data, and in asking 'so what' questions." |
| "We have increased the level of employee involvement and are using data to drive decision-making. In addition, I believe we have improved delivery of services to students." |
| "Through the use of the Criteria, more staff, faculty, and administrators were able to more freely communicate the mission and goals of the organization. The assessment of performance factors has led to a wider understanding of the college goals and where the college should improve." |
| "The use of the quality criteria has enabled us to focus on areas of strength and areas needing improvement. Using quality criteria and practices has enabled us to accomplish this based on fact, rather than 'gut feeling' or guesses." |

Figure 14. Continued

|  |
|---|
| "Most employees feel like they have a voice in improvements and they feel individually involved in the improvement process. Many improvements to the campus and to processes have occurred because of team suggestions." |
| "The most significant impact of using quality criteria has been to encourage people from across the college community to participate in the decision-making process – and faculty and staff have done that. There is a mechanism for people to be involved in making and implementing decisions. This has affected programs, scheduling, staff meetings, feedback to administrators, and general communications." |

Figure 14. Sample Narrative Responses to Question #1

In addressing the issues of change and transformation as a result of quality efforts, words such as focus, participation, and unified effort appeared most frequently. The community college leaders who have embraced quality efforts seem to welcome change and the challenges associated with it. Their responses are direct and appear to include realistic, grounded specifics.

The following is a quotation from one of the respondents. This quotation best summarizes the responses for Question #1,

> For the first time, we were able to see the whole and how all the pieces fit or should I say, didn't fit together. Baldrige forced us to think about the college as a system. This helped us identify gaps we hadn't recognized before.

| **Qualitative Question #2**<br>**Are the Baldrige Educational Quality Criteria an equally strong method for quality assurance as compared with traditional accreditation? Why?** |
|---|
| "Baldrige is a better method because it does a more effective job of assessing processes and results on an ongoing rather than episodic basis. Traditional accreditation standards do not have the same way of linking the college as a whole." |
| "By far! They are more comprehensive, interlinked, and force an institution to focus on its 'key business' -- student learning." |

Figure 15. Continued

| |
|---|
| "Quality measures are stronger than traditional measures that reflect past accomplishments. Quality measures are aimed at the future and renewal efforts. Baldrige goes beyond the 'we are doing what we say we do' by communicating effective practices. Baldrige also gives a framework for evaluating an institution's effectiveness." |
| "The Baldrige Criteria allow us to determine the areas we want to work on and develop rather than focusing on what we already do well and will continue to do well." |
| "The Baldrige Educational Quality Criteria are a stronger method for assuring quality. They force you to take a broader view of your organization, use benchmarks, and are more focused on measurement and continuous improvement." |
| "Baldrige makes lasting improvements in an organization that has a much greater impact overall. The traditional method for accreditation simply does not focus on continuous improvement, but rather encourages colleges to do enough to pass 'inspection.'" |
| "I think the Baldrige criteria are stronger than accreditation because Baldrige is more proactive in nature. Traditional accreditation takes a moment in time and evaluates the college on what we have done and are doing. The Baldrige Criteria looks at what we should be doing in the near future and distant future to improve. Baldrige is focused on outcomes not inputs. Baldrige also assesses continuous quality improvement across numerous indices while accreditation results in the production of a multi-page report that doesn't focus college attention throughout the cycle." |
| "The Baldrige Criteria give some meaning to accreditation. It allows the institution to identify weak areas and work to improve those areas. My opinion is that Baldrige creates a culture of continuous improvement and the 'traditional' accreditation process promotes management under pressure. Implying that institutions prep for a self-study or site visit then forget about accreditation." |

Figure 15. Sample Narrative Responses to Question #2

The responses to the question of whether the Baldrige Criteria are an equally strong method for quality assurance can be captured in three emphatic words: "Baldrige is better." With the exception of only two of the 106 responses, the leaders all echoed the same sentiment. Although they commented on the difficulty of implementing and sustaining quality efforts, they wholeheartedly agreed that the Baldrige Criteria are a more meaningful framework for measuring and assuring quality and effectiveness in community colleges.

For Question #2, this quotation by one community college leader best represented the thoughts of the majority,

> Quality improvement is embedded in an organization. Accreditation is episodic and focuses primarily on what the site team saw on a given day. Quality criteria show improvement or opportunities for improvement on a regular basis. This regular basis makes us feel as though we are initiating the need for change – we are in control rather than some outside agency.

| **Qualitative Question #3**<br>**What are the institutional challenges of using the Baldrige Educational Quality Criteria?** |
|---|
| "The greatest challenge is having adequate human resource capacity to identify measurable outcomes, collect data, report data, and act upon the data results." |
| "One challenge is overcoming resistance of some staff who may view the criteria primarily as a 'business and industry model' not suited to education. There are many closed-minded people who are stuck in the comfort zone called 'tradition.'" |
| "The greatest challenges in using the Baldrige Criteria are: 1) Providing meaningful in-service activities to help all employees understand and apply the criteria in their work, 2) Improving in the areas of Student/Stakeholder Focus , Information and Analysis, and Process management, 3) Motivating our staff to find and utilize comparative data in process improvement activities." |
| "Through the use of the Criteria, institutions need to practice what they preach (or value). Systematic processes must be developed and all actions communicated to the internal and external community. This will be a challenge to most institutions." |
| "The biggest challenge that I have found is being able to effectively measure our processes. Due to the nature of the education business much of what we do is very difficult to measure effectively." |
| "Language issues among faculty combined with the feeling that it is a business model not applicable to an educational organization. The implementation requires tremendous patience and an unswerving commitment. The framework is also focused on systems thinking and outcomes which are of course driven by results. Results hold people accountable. Accountability is politically charged." |
| "Continuous measurement and monitoring makes it seem like you're never done. Another challenge is to link strategic initiatives to all parts of the college." |

Figure 16. Sample Narrative Responses to Question #3

The qualitative response data for Question #3 fell into the following categories: funding, training, obtaining support, and following through. Many of the respondents cited the importance of allocating ample funding as well as human resources to the quality effort. Historically, community colleges have had very limited data collection capabilities and small research staffs. Respondents noted the need to hire additional research staff members and provide additional funding support to the data collection and analysis process. The training issue was emphasized by the majority of respondents as well. In order to understand and adapt any new planning model (especially one as comprehensive as Baldrige), all community college employees need to be trained initially and then attend periodic training sessions. The ongoing training process was indicated as a critical component to the success as well as a major challenge for community colleges that chose to adapt the Baldrige Criteria. The issue of buy-in and support from all employees poses a challenge for all organizations. The respondents in this study noted that quality initiatives are more successful when all employees and constituent groups feel included and understand the value for themselves and the college as a whole. The final trend in responses that emerged from the qualitative data was the need for community college leaders to "walk the talk." In other words, the leaders need to demonstrate by their words and especially by their actions that quality principles are valued as well as practiced. Community college leaders felt that this authentic demonstration of support was one of the most challenging aspects of incorporating the Baldrige Criteria in community colleges.

This specific response articulated the thoughts of most community college leaders responding to Question #3,

> It has definitely been a challenge and I'm sure for many others, working in an environment in which we are trying to change paradigms -- our ways of perceiving our work culture and our ways of implementing changes. Probably our best example of this is in our implementation of TQM principles on our campus. While initially TQM/CQI was embraced by many, I found that practice is difficult when the culture of the college and the people in it are entrenched in traditional methods. This entrenchment is not limited to one group of staff, but includes all of us, including managers. TQM in higher education has definitely had its share of skeptics. We were fortunate though to have a great deal of support and buy-in from all segments of staff -- faculty, classified, and management. We can even say that students have been very active participants.

| **Qualitative Question #4**<br>**Why should other institutions consider using Baldrige Educational Quality Criteria?** |
|---|
| "It truly leads to a better organization. It is refreshing to have everyone in the organization thinking of ways to make the college better." |
| "Because ongoing, incremental assessments of success rather than jerky responses to end-of-the-year assessments are made [using quality criteria]. College employees better understand the 'whys' as well as the 'whats' to improvement!" |
| "1) They have nothing to lose; 2) Can be enlightening experience, even to just 'explore' the possibility; 3) Get on board because the world is changing and they better make the adjustment." |
| ""Personally, I am sold on the Baldrige Criteria. I think all colleges should use it. The Baldrige Criteria also force you to focus on accountability which is where our focus should be. Traditional accreditation standards are not nearly so focused on customer and accountability." |
| "1) Continuous self-evaluation using the Baldrige Criteria provides a more effective way to respond to institutional needs for improvement; 2) This approach more effectively engages the whole campus in the process of improvement; and 3) The Baldrige promotes on-going evaluation which leads to regular, continuous 'real time' adjustments in lieu of fragmented reviews every 7 – 10 years." |
| "Unlike being assessed at a minimum value, the criteria reinforce the meaning of excellence in college programs and services (maximum value)." |

Figure 17. Sample Narrative Responses to Question #4

The responses to Question #4, incorporated a zealous spirit. The community college leaders agreed that quality principles are well worth trying and applying in a community college setting. The respondents explained that the Baldrige Criteria pushes institutions beyond the typical comfort zone which can be difficult to endure, but the outcomes appear to be far greater and more meaningful than if the colleges had not tried Baldrige at all.

One of the community college leaders captured the feelings of the other respondents by saying,

> The Baldrige Framework has caused us to re-think everything to make sure it fits and supports this framework. It's not easy; it's an on-going process of continuous improvement, but it's definitely worth it. It is also a paradigm that if used effectively, can drive institutional change and improvement. It enables the institution to become more student/stakeholder and market focused as well as more data-driven. Finally, it helps to facilitate the use of CQI principles and practices in an educational environment.

| **Qualitative Question #5**<br>**What advice would you give to other community college leaders who are considering the use of quality criteria?** |
|---|
| "Be patient. It takes a lot of time. Keep it simple and practical not conceptual with words that are difficult to understand. Get some faculty members involved early in the process." |
| "1) Work through your college's culture; 2) Involve everyone; 3) Use models from other colleges or organizations that are valued by the community college to encourage buy-in; and 4) Use continuous quality processes for instruction rather than throwing the concepts at the college all at once." |
| "Inform the internal college constituency about the model, its advantages, and support openness and dialog about what the institution expects to gain by making the commitment to the model." |
| "Introduce the concepts slowly and in a non-confrontational manner. Find new words to replace customer and accountability. Don't bring in business. They [college employees] don't want to hear it." |

Figure 18. Continued

| |
|---|
| "1) Make sure the concept of quality is embraced/supported by senior leadership; 2) If your state has its own program for performance evaluation based on quality criteria, encourage employees to become state examiners; and 3) Allow sufficient time for training employees and for assisting them in understanding and adapting to the new 'mentality' of the quality approach." |
| "Colleges need to understand that this is a harder, longer journey and they should prepare their employees for that. However, they need to also point out to their employees that using quality criteria enables the college to clearly focus on what is most important – the students." |

Figure 18. Sample Narrative Responses to Question #5

One of the common pieces of advice from the community college leaders surveyed included the importance of patience when implementing all aspects of the Baldrige Criteria due to the length of time required to infuse these elements into a community college environment. Another trend in the responses to this question included enlisting the support and advice from other community colleges that have experienced success with the Baldrige Criteria on their campuses. Respondents felt that advice from other community college experts would be viewed as credible and they would be welcomed as colleagues who understand the community college environment.

In conclusion to Question #5, one respondent noted,

> Because it requires a change in the college's culture, you need to be in it for the long term and not expect immediate visible results. Also, recognize that it will take resources to implement. It is important to recognize that is not a 'one size fits all' program and each college needs to develop its own 'style.' In addition, in-service training for all top level administrators is critical so that the leadership team can determine whether Baldrige is right for their institution. Leadership commitment is vital as is the assistance of a full-time staff member who can help spearhead the quality efforts on campus.

| **Qualitative Question #6**<br>**How is an institution that is using Baldrige Educational Quality Criteria perceivably different than other community colleges?** |
|---|
| "I think that colleges who embrace the Baldrige Criteria are viewed as innovators and as colleges who are willing to take risks in order to improve." |
| "They place a high premium on quality and are willing to invest the time, effort, and finances to pursue such." |
| "The organization is energized because of the potential for major change based upon data collection, focus on customer service, and employee involvement. People within the organization are provided with information about all aspects of the organization and there are no secrets. Consequently, there is a stronger allegiance to the organization. The organization is not stagnant but open to new ideas and people feel good about working in such a place." |
| "It knows where it is heading and will know how to assess steps along the way. More importantly, it knows when to change course. These colleges are considered a bit like mavericks, but are admired for it." |
| "Community colleges that use Baldrige are organizations that are clearly interested in self improvement and future organizational development. Colleges that use Baldrige are results oriented and their improvement efforts are better aligned with institutional goals." |
| "Community colleges that use Baldrige 'get it!' They have more of a business and entrepreneurial mindset. They are focused on results and aren't afraid of change. They are on the cutting edge." |
| "I believe that such an institution is seriously committed to making change and improving their organization, and willing to hear and see the bad with the good (some degree of bravery!). More progressive and dynamic. Has a culture and management style that truly values employees and embarks in high levels of collaboration." |

Figure 19. Sample Narrative Responses to Question #6

The trends regarding how community colleges using Baldrige Criteria are perceivably different included: agile organization, stronger planning processes throughout the organization, and a willingness to continue to seek ways to become a better institution by always changing and progressing. The respondents were incredibly candid and passionate in their responses to this particular question. They report the differences they, the students, the community, and others have clearly seen as a result of the quality efforts on their campuses. Their responses convey feelings of pride in their own efforts as well as in the entire institution.

For Question #6, one respondent synthesized the thoughts of the others by saying,

> Institutions that use the Baldrige Criteria are considered innovative and high performing, market and results driven educational institutions. Most organizational improvement efforts have a direct impact on student success and/or satisfaction. A college that uses the Criteria knows what is a priority to focus upon and pays attention to being the best it can be. It is a great place to learn and work.

## ANALYSIS FOR THE RESEARCH HYPOTHESIS

The following presentation of results pertains to the qualitative, open-ended survey questions that most directly respond to the research hypothesis for this study: The use of Baldrige Educational Quality Criteria provides community college leaders and external evaluators with richer, more meaningful data for organizational improvement, more comprehensive information about the institution, and a better means for illustrating clear connections between campus systems and processes. Two qualitative questions best address the study's research hypothesis. These key survey questions are:

Qualitative Question #2: Are the Baldrige Educational Quality Criteria an equally strong method for quality assurance as compared with traditional accreditation? Why?

Qualitative Question #6: How is an institution that is using Baldrige Educational Quality Criteria perceivably different than other community colleges?

The information in Figures 15 and 19 includes summaries of the key data generated by college leaders for the two questions that most directly respond to the issue of whether the Baldrige Educational Quality Criteria could serve as another model for accreditation.

## SUMMARY

This national survey was conducted based on a sample of community colleges that are using quality principles. The community college leaders surveyed in this study are also familiar with traditional accreditation standards. The data gathered in this study represents the opinions of community college leaders at a particular time and is therefore considered a cross-sectional design.

The Baldrige/Institutional Effectiveness Questionnaire used in this study produced observations in the form of numbers (quantitative data) and narrations (qualitative data) as well as demographic data. The responses provided to the quantitative closed questions were analyzed using statistical processes to achieve comparisons and determine relationships among the Baldrige Categories on the survey instrument. The narrative responses to the six open-ended questions were clustered by similar themes (according to each question) and compared in order to glean feedback that added richness to the numerical data. The following chapter, Chapter V, presents a discussion of these results and the relationship to the literature as presented in Chapter II as well as the implications for future research.

# DISCUSSION OF FINDINGS, RECOMMENDATIONS, AND CONCLUSIONS

## INTRODUCTION

This chapter summarizes the findings of the study and based on the results obtained from this study, makes recommendations for implementing Baldrige Educational Quality Criteria as another model for regional accreditation standards in community colleges. The qualitative feedback from the community college leaders was clearly supportive of other community colleges that are interested in using quality principles for institutional effectiveness and improvement. Finally, the discussion presents conclusions and addresses the need for further research into critical questions that emerge from the current study.

## RESEARCH METHODOLOGY

The survey instrument for this study titled "Baldrige/Institutional Effectiveness Questionnaire" examined how community college leaders perceive the value of quality criteria and the level at which these criteria are practiced at their particular institutions. Additionally, the questionnaire examined how community college leaders perceive the quality criteria as a measure of institutional effectiveness as compared with traditional accreditation standards.

Quantitative research methodology was used to collect data related to the seven categories using a dual scale of "Value" and "Practice." Twenty-five questions elicited 50 responses using this dual scale format. Each survey question was designed to measure the institutional value placed on a particular item as well as the institutional level of practice of this item. Data were collected using absolute and relative frequencies.

Quantitative data analysis was conducted using a statistical package for the social sciences software (SPSS 10.1). A Cronbach's Alpha of the responses to specific value statements in comparison to the practice statements was conducted. The data collected were also compared using correlations for each category as well as the difference between the Value Scale and the Practice Scale. Lastly, ANOVAs were calculated for the quantitative questionnaire items.

The target population that the survey sample represents is any community college interested in using quality tools and principles as another model for accreditation in order to improve institutional effectiveness.

## LIMITATIONS RESULTING FROM METHODS

Although the study achieved a strong response rate with 52.5% returning the questionnaires, the web-based method for collecting questionnaire data made responses anonymous. Therefore, differences could not be discerned between the community college leaders who returned the questionnaires and those who did not. The demanding workload of many community college leaders due to immediate project deadlines, heavy responsibility level, and impacted schedules might have delayed or even prevented some in the larger survey sample from responding in a timely manner thus omitting their input from this study.

## UNIQUE FEATURES OF THE SURVEY INSTRUMENT

This questionnaire was unique because it was the first of its kind to specifically survey a national audience of community college leaders on quality concepts specifically examining the particular level of value and practice at their institutions. It also queried leaders in an effort to obtain their candid comments and insights regarding the benefits and challenges of Baldrige Criteria compared with traditional accreditation standards. Combining quantitative questions with qualitative ones allowed multiple types of data collection and analyses. This helped in the triangulation process that neutralizes biases inherent in one particular data source. The quantitative and qualitative questions on the survey instrument added to the breadth of the study. The six qualitative questions provided the researcher with detailed information that augmented the information indicated in the 50 closed-choice quantitative questions.

The questionnaire was also unique in its design. It was created in a colorful, visually appealing, web-based format and was disseminated via electronic mail (colorful format and ease of response). The questionnaire design incorporated a combination of quantitative questions (50 closed questions), qualitative questions (six open-ended questions), and ten demographic questions. The comprehensiveness of the survey provided multiple and varied data elements for the researcher to examine.

## LIMITATIONS RESULTING FROM CHOICE OF INSTRUMENT

Quantitative items on the questionnaire addressing the Value and Practice of quality criteria at the community college leader's institution asked for the perception of the respondent. The responses might have differed based upon distinct perspectives/views held by particular respondents, unique experiences at each respondent's college, and differing stages in the quality process and/or years of quality experience of each respondent. Another important consideration is that the perceptions of the respondents reflect their current views and are only applicable at this specific point in time.

## RESPONSE BIAS

The community college leaders included in this survey sample could possibly have been inclined toward more positive rankings in order to more positively reflect on themselves and their specific college. The concern regarding response bias is a legitimate one. Certainly all of the community college leaders surveyed in this study are familiar with and are using (at some level) quality principles and practices. Thus, they might be more inclined to be perceived as more favorable in their attitudes toward quality, but their candid responses and the researcher's commitment to their confidentiality proved otherwise. Their responses to the open-ended qualitative questions in particular offered criticisms illustrating some of the difficulties they encountered when applying quality principles. The respondents appeared to be quite candid in their responses.

## SUMMARY OF FINDINGS

Because the quantitative statistics are based on the opinions/perceptions of community college leaders, with the exception of a few specific questions, the responses to quantitative questions did not reveal much distinguishable disparity. As a group, the level of agreement with the value of quality criteria at their institutions was strong. Although the level of agreement was high, the respondents' attitudes related to the practice of different elements of quality was slightly mixed but tended to be positive overall. So, while the responses to the quantitative questions proved interesting, the most meaningful and detailed data emerged from responses to the qualitative, open-ended questions.

Community college presidents were more likely to respond with favorable and positive responses of "Always values this" and "Always practices this." Since college presidents are the main institutional leaders whose emphasis on the Baldrige Criteria is the impetus for applying this framework to the organization, then perhaps it is understandable why this group would hold more positive and optimistic views about the value and practice of quality. On the other hand, the responses by the ten Institutional Researchers tended to be slightly lower on the value and practice items. The researchers are the individuals who have a major responsibility for managing critical aspects of the Baldrige process including data collection, data analysis, and frequent evaluation of the data. They are the individuals who execute the work that quantifies how a community college is performing in measurable terms.

In the qualitative questions, community college leaders cited the stability of leadership and continued emphasis on quality systems and processes as critical components to the sustainability and success of Baldrige Educational Quality Criteria on community college campuses. In addition, they noted that continuous training and re-training of staff members at all levels in the organization are imperative to the continued success of any quality effort. Their advice to others included the need for patience because the adoption and adaptation of quality principles is a slow process. They also emphasized the importance of allocating adequate resources including staffing resources for data collection as well as financial support for the purchase of data collection instruments and staff development training programs. Finally, the community college leaders (in all positions surveyed) cited the benefit of calling upon the expertise of other community college colleagues who have experienced success with the quality processes. The advice from others with more quality experience was deemed to be most useful in positively influencing key campus staff members when a college is attempting to gain acceptance for implementing quality processes in their particular setting. Several respondents also noted how colleagues from other quality-focused community colleges provide: 1) valuable insight regarding the potential challenges, 2) the long-term benefits that can be achieved, and 3) honest, practical advice.

When addressing how their institutions have changed/transformed by using quality principles (qualitative Question #1), one respondent noted,

> Through the infusion of quality principles and practices, our college has placed greater emphasis on data-driven decision-making and the importance of benchmarking. We have also specifically focused on the need to expand and continuously improve our hiring, orientation, and training processes at the college in order to reinforce the importance of quality practices.

Another respondent provided the following response to qualitative Question #2: "Are the Baldrige Educational Quality Criteria an equally strong method for quality assurance as compared with traditional accreditation?"

> Baldrige challenges institutions to 'dig deeper' to truly discern the areas in need of further improvement (opportunities for improvement). Accreditation was more of a compliance exercise for our college in the past. When we used only the accreditation standards, we just sought anecdotes for satisfying each item. When we transitioned to an emphasis on Baldrige, we began asking tougher questions such as 'Why do we do this?' and 'How well is this process working?' and 'How well is this process working in comparison to other colleges and/or to past years at our own college?' These are critically important questions that lead to real change and improvement in an organization!

A response to qualitative Question #6 asking "How is an institution that is using Baldrige perceivably different from others?" that proved compelling to the researcher was

> Institutions that are using quality criteria are perceivably different than others because: They are more persistent in learning about the results of a Baldrige assessment and improving upon these results; There is more integrity for an institution when it says it is excellent (or not) in some or all areas; and these institutions hire very carefully and well.

A couple of respondents did note however, "The resistance to 'real' assessment of outcomes is difficult to overcome," and "Everything that I have seen is short term and does not address the fundamental questions: 1) Has 'real access' been afforded? 2) Have people achieved meaningful, effective learnings? and 3) Have our local communities been uplifted by these achievements?", the vast majority of responses touted the attributes of quality processes and provided encouraging advice to others. Some of the community college leaders surveyed did caution against the applicability of the Baldrige Educational Quality Criteria to all community college settings or even the majority of community colleges. They said it is not the solution for everyone. There are several reasons why the Baldrige framework may not be successful in all community colleges. Some community colleges may have internal conflicts and/or organizational barriers causing the institution difficulty with meeting the basic qualifications for accreditation. If a community college has encountered challenges with achieving accreditation status and maintaining a positive accreditation status, these are clear indications that the institution most first establish a stable foundation upon which to build. Perhaps after the basics have been re-built and the college's foundation is strong, then the institution could begin to consider Baldrige sometime in the future. Baldrige emphasizes the importance of data-driven decision making, interconnectedness of all processes throughout the college, and a clear organizational focus. These demands may be beyond what some community colleges that are enmeshed in internal strife or organizational instability are prepared to address.

Responses to the qualitative questions provided meaningful insights from community college leaders. With regard to the six qualitative questions, the level of agreement proved to be extremely strong and quite consistent overall. The responses by the participants in this study from 34 community colleges in 15 states refute the statements from authors such as Birnbaum (2000) and other critics of continuous quality improvement processes. Perhaps these ardent critics never truly grasped the application in a community college setting or have never been part of a campus culture that embraces this method of developing more efficient processes and systems that are measurable and potentially superior to the traditional methods.

The findings of this research can be summarized as follows: 1) There is a relationship between the Value and Practice Scales on the survey instrument as indicated in the correlations; 2) The face and content validity of the survey instrument are very high as is the instrument's reliability; 3) The findings support the value (quantitative responses) and applicability (qualitative responses) of the Baldrige Educational Quality Criteria to community colleges; 4) The results of this study suggest, according to the opinion of a broad array of community college leaders, that the Baldrige Educational Quality Criteria can in fact be utilized (as demonstrated by the Practice Scale of the quantitative questions and in the candid comments in the qualitative questions) as another model for traditional accreditation standards; and 5) The results of this study support the research hypothesis.

## LIMITATIONS ON DISCUSSION OF RESULTS

This study's results may not be transferable to every community college setting. Since the college leaders who participated in this study were all members of institutions that use quality principles, the findings in this study might not apply to other community colleges that do not already possess some familiarity with the Baldrige Educational Quality Criteria. In addition, the results of this survey can only serve as a compass to determine community colleges' current progress regarding quality and accreditation.

## GENERALIZABILITY

The generalizability of these findings is quite positive given the clear relationship of the Value and Practice Scales as indicated by the correlation calculations. The strong validity and reliability of the questionnaire also support the usefulness of the instrument in establishing generalizations. The high consistency of qualitative, open-ended comments as well as the similarity in quantitative data leads this researcher to conclude that those who responded likely reflect the views of leaders at community colleges who are currently using quality principles. The findings confirm that the respondents were from community colleges of all sizes and from a wide variety of geographic regions. Thus, the Baldrige Educational Quality Criteria and quality principles are applicable to many types of community colleges based on this study's results.

Although this study is exploratory in nature and is primarily designed to document the existence of a connection between perceptions of community college leaders using quality at some level in their organizations and the ability of the Baldrige Educational Quality Criteria to serve as another potential option for accreditation, it was an initial means of exploring a topic where limited research currently exists. By recognizing these limitations, this researcher believes the results can be generalized to a larger group of community college leaders who possess similar traits and knowledge of quality concepts.

Lastly, the participants were drawn from 34 different community colleges in 15 different states. This wide distribution minimized the occurrence of state or regional biases skewing the results. The nationwide sample in this study created a heterogeneous sample that encouraged diversity in perspective.

## RECOMMENDATIONS

### Obtaining Information from Key Resources

Based on the findings in this study, the first recommendation for community college leaders interested in learning more about quality principles and practices is to pursue several potential resources. Some of opportunities for community colleges to gain additional information and insight into continuous quality include the Academic Quality Improvement Project, the Continuous Quality Improvement Network, and State Quality Award Programs.

### Academic Quality Improvement Project

The Academic Quality Improvement Project (AQIP) is sponsored by the Higher Learning Commission of the North Central Association. In 2000-01, colleges and universities began to apply for participation in the AQIP. This unique opportunity is designed for institutions of higher education that "wish to align continuous quality improvement efforts with accreditation" (AQIP, 2002, p. 1). The AQIP includes "a comprehensive process for encouraging and assisting colleges that are interested in transitioning from the traditional accreditation model to a quality focused approach to accreditation reaffirmation" (AQIP, 2002, p. 1). The AQIP includes several different levels of institutional involvement: interest exploration, strategy forum, self-assessment, annual update, vital focus, action projects, systems portfolio, systems appraisal, and reaffirmation of accreditation. Each step in the AQIP process addresses the differing needs of colleges and universities. For example, the vital focus step is a pre-requisite for colleges interested in joining AQIP. The vital focus assessment "engages the campus in identifying the greatest opportunities for significantly improving the institution and introduces continuous quality improvement concepts in academic language and context" (AQIP, 2002, p. 2). The application to join the AQIP specifically states, "Institutions accredited by U.S. regional accrediting agencies other than the Higher Learning Commission may participate, but only for improvement purposes, not institutional accreditation" (AQIP, 2002, p. 3). Thus, any community college in the country that is interested in exploring the applicability of quality principles to their particular organization may apply to join the AQIP.

Several of the respondents in this study specifically cited the benefits of participation in AQIP. One respondent wrote,

> As a participant in the NCA AQIP process, we have been able to focus on three key processes for in-depth analysis and improvement activities. To date, it has been manifested in a reorientation of our approach to solving problems, in our recognition of the importance of meaningful, useful data, and in asking 'so what' questions.

Another respondent added,

> The college is moving to the AQIP model accreditation. We have come to recognize our short comings in not using enough data to make decisions. We are developing the framework to collect and correct data, interpret the data, make sound decisions. We are happy to look at our processes and procedures with a critical eye and work toward improvement.

Finally, this questionnaire respondent compared AQIP with traditional accreditation:

> Using quality criteria (whether Baldrige or AQIP or whatever) places emphasis on improvement more so than does traditional accreditation which has more emphasis on validating what you are already doing (more of an 'inspection'). Also, adopting a philosophy of continuous quality improvement means you are continually assessing your progress toward your quality goals, continually measuring and looking for ways to improve. The traditional accreditation model really only 'requires' that you look at what you are doing periodically.

### Continuous Quality Improvement Network

The Continuous Quality Improvement Network (CQIN) began in 1991 when a small group of community college presidents met to design and create an organization for having "open and honest sharing of information – the 'pluses and minuses' among community college presidents who have committed to implementation of Total Quality Management principles, practices, and tools as a way of continuously improving their institutions" (CQIN, 2001, p. 1). Over the past 11 years, the CQIN has grown to 45 members including one Korean College, one business organization, one baccalaureate level institution, one accrediting association, and 41 community colleges nationwide. This dynamic organization focuses on "assisting member CEOs with active organizational transformation via out-of-the-box learning and sharing best practices" (CQIN, 2001, p. 1).

Several questionnaire respondents in this study specifically noted the advantages of participating in the CQIN:

> My advice would be to get involved with an organization such as CQIN. The connections made with other organizations that are focusing on quality helped to generate new ideas for leaders at my college and inspired them to continue to implement quality tools in their college divisions.

The Continuous Quality Improvement Network provides two types of institutional assessment tools known as the Trailblazer and the Pacesetter. The Trailblazer assessment provides member colleges with an opportunity to conduct a mini Baldrige-like assessment using the entire institution or just a specific program or division. The Trailblazer assessment is then reviewed by two examiners who provide the applicant college with a feedback memorandum detailing specific areas of commendation and other areas for further focus and improvement. The Pacesetter application process is far more comprehensive in scope than the Trailblazer. The Pacesetter assessment is more closely aligned to a full Baldrige application and requires the college to respond in depth to Baldrige questions as well as provide data to demonstrate institutional success and progress. Upon the submission of a Pacesetter application, a group of trained CQIN examiners review and consult together to develop a very detailed feedback report for the Pacesetter applicant. If the team of examiners deems the Pacesetter application to be of high quality, then the examiners conduct a thorough site visit of the institution. This site visit is conducted similarly to the site visits held by Baldrige examiners. The entire community college becomes involved in the site visit as staff members, students, and other stakeholders are interviewed and documents are reviewed in depth.

A couple of questionnaire respondents in the present study included statements about the value of the Trailblazer assessment: "We are using the CQIN Trailblazer guidelines for the first time. I have seen an awareness of quality in all aspects of the institution." Another respondent wrote:

> Our Leadership Focus 'It's about students' came about after a Trailblazer assessment revealed that the college community wanted a specific leadership focus created by the Leadership Team with college wide input. A process was created to gather input and the Leadership Team created the focus and the President communicated it to employees throughout the college. The statement has been embraced by employees from all levels within the organization and has provided a hook upon which to hang a lot of our quality initiatives.

## State Quality Award Programs

As community colleges begin their quality journey, many of the respondents in the study also conveyed the benefits of initially applying for a Baldrige-based state-level award program to obtain constructive and comprehensive feedback on the institution's progress. Nearly every state has now developed a quality award program based on the Baldrige Educational Quality Criteria. These state-level programs serve as a preliminary step to the National Baldrige Award Program. Whether or not community colleges are actually interested in achieving a quality award, the community college leaders in this study agreed that the state as well as the national quality program application process is currently the only method for obtaining feedback from other leaders who are thoroughly familiar with the Baldrige Criteria.

## Climate for Applying Quality Principles in Community Colleges

A second recommendation for community college leaders is to assess the institutional climate to determine whether it is an opportune time to implement quality tools and principles. Kessler (1995) emphasizes the "importance of cultural readiness" for organizations that plan to undertake the challenge of Baldrige (p. 15). It may be appropriate to examine whether a community college is facing an institutional crisis point and/or whether the college is grappling with other issues such as financial challenges, personnel difficulties, etc. Under certain institutional conditions, the Baldrige Educational Quality Criteria can be effectively applied in the community college as a means for stimulating change and improving campus systems and processes. The Baldrige Criteria can serve as an extremely useful method of demonstrating and measuring institutional effectiveness. It appears to be a viable model for re-accreditation for some community colleges.

In her presentation "Workforce Continuing Education" at the 2001 Futures Assembly, Dr. Sue Pardue (who is employed by a community college not included in this study sample) stated, "Whether large or small, an organization can benefit from conducting a self-assessment using the appropriate Baldrige Criteria for performance excellence and taking action for improvement" (February 12, 2001). The research in the present study confirms Pardue's statement. No significant differences in perspectives held by urban, suburban, or rural college leaders were detected. All of these community college leaders collectively held similar views about the value of the Baldrige Educational Quality Criteria and the improvement efforts already achieved on their own campuses.

Marcel Proust wrote, "The real voyage of discovery consists not in seeking new landscape but in having new eyes" (Hutton, 2000, p.85). Baldrige can provide a new perspective on assessment, accountability, and institutional effectiveness for some community colleges. The Baldrige Criteria focuses on issues at a deeper level and asks the questions: "How well do the processes at the college function?" and "How is the college using data to improve processes and outcomes?" These are critical and demanding questions that require intensive analysis because they open up a perspective for self-analysis quite different from the more traditional compliance-oriented questions typically found in an accreditation self-study. Furthermore, because of the subtle nuances of the Baldrige-based questions, many college staff members seem to find it challenging to understand and apply the criteria. This learning clearly requires practice and concentrated time devoted to analyzing the Baldrige questions as well as the necessity to carefully review current college processes in order to comprehend how different areas affect other critical aspects of the organization.

### Comprehensiveness of the Baldrige Criteria

In contrasting the Baldrige Educational Quality Criteria with traditional accreditation standards, the Baldrige Criteria are perceived to be a more comprehensive method of measuring the success and improvements made in community colleges. As one respondent in this study commented, "Using Baldrige Criteria results in far richer feedback from campus staff as well as from external stakeholders (employers, parents, civic/community leaders, etc.)." This feedback thus enables multidimensional application over time for assessing institutional effectiveness. The Baldrige Criteria are non-prescriptive and therefore allow community college leaders to determine the critical areas of focus for their institution when applying the Criteria. Baldrige encourages community colleges to select the key measures that are most appropriate for that particular institution and then measure those objectives over time as well as in comparison to other benchmark organizations.

Key aspects of the Baldrige Educational Quality Criteria can indeed be incorporated into daily campus processes, annual college goals, and strategic planning systems. The following figure incorporates words and phrases used by respondents in the study to describe traditional accreditation standards as compared with the Baldrige Educational Quality Criteria.

| ACCREDITATION | BALDRIGE |
|---|---|
| **Similarities** | |
| Focused on institutional success and effectiveness | Institutional improvement and success |
| Emphasizes results | Results, measurement, data-driven, data-informed |
| Evaluation tool for improvement, impetus for updating processes, change agent | Addresses gaps, opportunities for improvement |

Figure 20. Continued

| Differences | |
|---|---|
| Episodic, periodic, every 6-10 years, sits on the shelf until next visit | On-going, continual, you never achieve perfection so you are never done improving |
| Extrinsic, traditional, focuses on inputs rather than outcomes | Inclusive, involves all areas of the institution, causes campus divisions to work together because everything is linked to everything else, nothing stands alone, progressive |
| Superficial | Meaningful, systematic process |
| Minimal Compliance | Depth, breadth, tough questions that delve into the institution's functions and reasons for doing things in a particular manner |
| Anecdotal | Campus wide linkages, connections |
| What does the college do? | How does the college do this and how well does it do this? |
| Specifically determined focus, can't deviate from the prescribed standard areas of focus | Allows colleges to address institutional "uniquenesses," incorporates the Approach (methodology), Deployment (implementation), Results in community colleges, more latitude in how you respond to the questions |
| Narrow focus that is pre-determined | Based on an objective scale for measurement of success and quality |

Figure 20. Comparison of Accreditation and Baldrige

There are commonalities between aspects of traditional accreditation and the Baldrige Criteria. Most community college leaders, whether they are following a traditional accreditation approach or are implementing a Baldrige-based model, desire to contribute and build strong, stable institutions that are based on clearly defined core values. This passion is evident in outstanding community college leaders who dedicate countless hours to improving the success of their institutions as well as reinforcing the vision, values, and mission of their particular colleges. In addition, community colleges leaders frequently seek methods for measuring these elements and finding ways to improve them. Their goal is to ensure that the systems in the college are robust.

## Using the Baldrige Framework to Address External Forces

Oftentimes, it is in the moments of greatest institutional strife that the reliance upon timeless core values and an enduring sense of purpose becomes most critical to community college leaders and corporate executives alike. Many external forces such as social pressures, scrutiny by the media, technological advances, and legislative edicts cause colleges to react by adapting different operating practices, new business strategies, and alternate delivery modes. The real difficulty arises when community colleges do not have clear frameworks for decision-making and assessment of current processes that can assist institutions in negotiating changes and making smoother transitions when necessary. A succinct response on one of the questionnaires addressed the issue of external pressures: "Movement toward quality makes sense given increased accountability from federal, state, and local agencies." It appears that the Baldrige Criteria can provide community colleges with a framework that allows the institution to respond to such external pressures with coherence and integrity.

One respondent advocating the Baldrige Educational Quality Criteria described,

> I believe community colleges using the quality criteria approach are perceived to be different in the following areas: 1) More informed on progress and areas for improvement, 2) More

> responsive to the needs of the college and its constituents, 3) Better prepared to meet future challenges of education in general and their college specifically, and 4) Better prepared to provide evidence that illustrates how effectively the institution is achieving its goals/mission.

The key element identified in this study seems to be a willingness by community college leaders to take an honest, objective look as reflected in this study at how well their organizations function to determine where changes are necessary and improvements can be made. The responsibility often falls on community college leaders to make these improvements a reality and to demonstrate these leadership principles daily and consistently over the long term. This focus can inspire those in community college settings to improve their organizations now and continue this process into the future.

Interestingly, there appears to be more examination of and interest in the Baldrige Criteria by regional accrediting associations. The implementation of the AQIP effort by the Higher Learning Commission of the North Central Association is clearly the integrated effort of accreditation and Baldrige. But many of the other accrediting associations are carefully watching the progress made by community colleges that are using quality principles. Cleary (2001) writes, "accrediting associations have been placing an added emphasis on measures of operational effectiveness and their use in leveraging institutional performance" (p. 41). There appears to be more of a trend toward the convergence of accreditation and Baldrige-like frameworks. Cleary (2001) adds, "There is no single right or best way to measure organizational quality" (p. 46). He is correct. There is definitely no particular panacea. The point is that when continuous quality efforts are tied to something concrete, these efforts become a required and important part of the college's daily processes.

### Addressing Leadership Challenges Associated with Implementing Baldrige

There are significant challenges to implementing Baldrige Criteria at community colleges. Some challenges that might arise for community college leaders that choose to adapt the Baldrige Educational Quality Criteria could include the necessity to allocate sufficient training resources and acknowledge the effort required for themselves and others to understand this comprehensive framework. Understanding the subtle nuances embedded in the Baldrige Criteria questions requires a considerable investment of time, energy, persistence, and patience.

Another challenge is the reluctance to change or adapt to a new model. Change can be uncomfortable for most, but new and exciting insights are rarely discovered without taking risks and being open to change. When these changes result in improved systems and processes in community colleges, then everyone at all levels (faculty, staff, students, and community members) benefits. The need for change is compelling. Given the demand for increased accountability, clear results, specific data, and measurable change, community colleges can no longer deny the need to make significant improvements in planning, processes, and outcome levels.

Without a doubt, the application of the Baldrige Educational Quality Criteria to a community college involves a major commitment from its leaders. The journey may be challenging, but the rewards are great and the result is worth the effort. The researcher acknowledges the difficulty of adopting a new way of operating, but for those who embrace quality concepts and begin to implement these elements into the campus culture, the result can be a far more beneficial outcome and an improved model for accreditation.

Strong leadership by clear example is critical to communicating the importance of quality concepts. This leadership commitment must be on-going and consistent. When quality efforts are linked to something specific and concrete, they become a required, important part of an institution's culture. The Criteria must therefore be integrated into the daily decision-making process for community college leaders in order to have a profound impact on the entire institution.

### Obtaining Campus-wide Support for the Baldrige Effort

If a community college plans to pursue the Baldrige model, then the college as a whole must focus on embracing the concepts, practices, and attributes the Criteria demand. The adoption of the Baldrige framework is not a one-time or episodic undertaking; rather, it is a continuous process of organizational learning, willingness to change, and desire to improve. The Xerox Corporation has won the Baldrige Award twice and continues to perform "… assessments of every business unit [in the corporation] every year" (Hutton, 2000, p. xv). Hutton (2000) continues by adding, "The [Baldrige] Criteria enables people to see the organization in a way that transcends the hierarchy of divisions and departments" (p. xxv). Because the Baldrige Criteria underscores the importance of linking most aspects of the college, it helps to break down institutional barriers by connecting the processes and personnel throughout the organization. When individuals begin to recognize how their efforts impact others, they are more apt to become involved in improving the process and take ownership for their areas of responsibility.

Finally, difficulties arise when fundamental differences in how a college looks at itself are not congruent with how Baldrige views an organization. Oftentimes, community colleges focus on specific functions within an organizational structure. The perspective of many community college employees is based on vertical organizational silos that stand apart from other aspects of the institution. Conversely, Baldrige emphasizes the importance of viewing the organization horizontally as a system where threads of various key processes cut across departments and divisions. Community colleges have a tendency to focus on resources, activities, and staffing whereas Baldrige focuses on approach, deployment, and measurable results.

Although some may perceive the implementation of the Baldrige to their organization as a daunting task, the ability to apply systems thinking to community college processes appears to be an effective way to improve the performance and effectiveness of community colleges in America. With the support of leaders who are willing to share their knowledge and insight, community colleges can continue to find approaches that make self-study requirements more effective and applicable to their particular organizations.

## Baldrige as not Solely a Business Model

As was noted in the literature review, some view Baldrige solely as a business model and neglect to recognize its applicability to community colleges. When introducing Baldrige in a community college setting, it is critical to convert some of the business jargon to educational terms (such as student rather than 'customer'). The term "customer" as well as other business analogies used in the Baldrige Educational Quality Criteria can cause many educators to react negatively. The concept of running a community college as a business can be interpreted by some as shifting to a cold, impersonal operational style. This does not have to be the case. The key focus for community colleges is on student learning. Since Baldrige requires colleges to collect and analyze data on a frequent basis, community colleges are then better equipped to make informed decisions about improving the student learning process based on substantiated data. Although some may consider the data driven decision process to be more business-like in nature, it is easily translated and applicable to the community college setting where educators can feel that their decisions are more firmly grounded in facts rather than anecdotes. In addition, based on the responses from many of the respondents in this study, it is clear that more positive connections with local business leaders can be established because most businesses are familiar with Baldrige and regard it highly. The business community recognizes and appreciates the rigor of the Baldrige Criteria. This alignment with the business community based on this data driven model that focuses on continuous improvement can help community colleges to "speak a similar language" with local business leaders as well as work together to address challenges that both institutions may be facing.

## CONNECTIONS TO OTHER RESEARCH STUDIES

In 1997, Freed and Klugman conducted a study focused on continuous improvement efforts in higher educational institutions. Their study incorporated the use of a questionnaire sent to over 400 institutions as well as follow-up in-depth interviews at select institutions. Their study found that "if top level administrators conduct some of the development (training) sessions (on quality principles), these individuals convey how important they feel the quality improvement approach is for their institution" (p. 208). This researcher found evidence to support Freed and Klugman's (1997) findings. In fact, the community college leaders surveyed in this study echoed these sentiments, specifically in the fifth qualitative, open-ended question that asked, "What advice would you give to other community college leaders who are considering the use of quality criteria?" The majority of the responses underscored the importance of having community college leaders actively demonstrate the value of quality tools and processes by their own words and actions. Clearly , these respondents underscore the need for leadership by example for quality efforts to be believed, understood, and accepted by others.

Freed and Klugman's (1997) study similarly noted that

> Implementation takes time at all levels of the institution. It may take leaders several months to a year or more just to educate themselves on quality principles. This time is usually spent reading books on continuous improvement; studying all the continuous improvement materials that can be found, many of

> which relate specifically to higher education; and visiting businesses and other higher education institutions that are implementing continuous improvement concepts (p. 208).

Again, this study supported the same findings. Many community college leaders surveyed cited the need for allocating sufficient time and resources to this new operational model called Baldrige. Because the terminology, techniques, processes, and emphasis of Baldrige is vastly different than what many community college educators are accustomed to, the 'learning curve' can be a long one. The questionnaire comments reinforced the need to maintain consistency, be congruent in words and actions, and be diligent in learning these new concepts and skills.

Freed and Klugman (1997) further state, "These new questions focus on the aims of the institution, interrelationships among parts of the organization, leadership, information updates, decision-making processes, improvements, and preparations for the future of the institution. By asking these types of questions, institutions can … deal directly with what needs to be improved" (p. 211). This researcher found that the Baldrige Educational Quality Criteria enable institutions to provide such focus in seeking improvement. The Criteria help to focus community college leaders and their institutions in a continual effort to improve and to carefully analyze the effectiveness of key processes as well as how to make adjustments to these systems and processes to achieve demonstrable improvement.

The community colleges studied have embraced quality, albeit at differing levels, and recognize the improvements demonstrated at their institutions. This study provided 106 community college leaders from across the nation with the opportunity to voice their opinions and share their perspectives related to the value and practice of Baldrige Criteria on their campuses. This research also gave these leaders a vehicle to candidly communicate their opinions that Baldrige is a meaningful model for institutional effectiveness, that other community colleges should consider examining these Criteria for application on their campuses, and that there are clearly perceivable distinctions between community colleges that use quality tools and those that do not. This meaningful perspective provides viable options for leaders and potentially aides others as they seek to improve institutional effectiveness in their community colleges. This research data substantially supports the notion that "Leaders need to look for opportunities to convince others of the value of continuous improvement" (Freed and Klugman, 1997, p. 209).

Finally, in a study that focused solely on the perceptions of community college Chief Academic Officers in California, Zagorski (1994) strongly recommended that community colleges adapt Continuous Quality Improvement (CQI) principles to every aspect of their operations. Zagorski (1994) contends, "Unless the community colleges make a paradigm shift to a new way of providing programs and services, they will rapidly lose their effectiveness" (p. 131). He concludes his study by encouraging further research be conducted by comparing "... colleges that are involved with CQI, relative to their success and failures. This type of study would provide valuable information to those colleges contemplating a paradigm shift in the way they conduct their business" (Zagorski, 1994, p. 133). He adds, "An in-depth comparison of the implementation of various CQI models in community colleges would be interesting and valuable to colleges searching for a model to adopt or adapt" (p. 133). This researcher believes that Zagorski's recommendations were fulfilled by this particular research study.

Although all of the other researchers cited documented and analyzed the use of quality principles in community college settings, limited research apart from this study can be found on using Baldrige Educational Quality Criteria as another accreditation model. This void in the research provided a compelling opportunity for this researcher to investigate these issues further. "Simple as the concept seems, the embrace of 'continuous improvement' as an organizational imperative has profound consequences: to reach ever higher performance levels every year out, an organization needs to think systematically about the constant improvement of all processes that deliver value to its customers …" (Marchese, 1993, p. 5). Marchese's quotation states the dominant and underlying value of taking up the challenge of continuous improvement.

## CAUSES AND IMPLICATIONS FOR FURTHER RESEARCH

Two goals were central to this research: to query community college leaders who are currently using quality tools regarding the value and practice of quality principles in their colleges and to obtain the candid insights of these leaders about the use of the Baldrige Educational Quality Criteria as another model for institutional accreditation.

The results of this study indicate that leaders recognize the value and the need to continue to practice quality principles in their colleges. In addition, they were emphatic in their positive comments about using Baldrige Criteria as an improved model for institutional accreditation. Finally, they offered this caution to other colleges that might be considering the use of quality principles: be willing to invest time in the training process of all college employees; focus on bolstering research offices so that better, more meaningful data for decision making can be gathered and analyzed; lead by example and consistently apply quality principles in daily actions; be patient because change occurs slowly and it takes considerable time for others to understand and accept these new methods of viewing the organization; and enlist the support of other community colleges that have achieved success in their quality efforts.

Some questions that warrant further investigation include:

- How do the perceptions of community college leaders change over time?
- Are other leaders of community colleges, faculty members, and others (including members of accrediting associations) willing to shed the biases that Baldrige is a business model only and accept the quality criteria as a useful accountability and assessment model for education?
- What methods can be employed to sustain quality principles and practices in community colleges over time?
- What is the impact on community colleges when key institutional leaders who are strong quality advocates leave the institution?
- How could further investigation by conducting in-depth interviews and campus visits add to this research base?

- How can the success of community college quality courses/programs offered to staff members through each institution's organizational learning/staff development office be analyzed and improved?
- What are the institutional characteristics associated with effective implementation of Baldrige (i.e. where won't it work as well)?

## CONCLUSIONS

It appears that through a Baldrige-based systems approach to improvement, community colleges are better able to look at, understand, diagnose, and change the processes within the organization. This is possible through analysis of all sub-systems and processes where the interrelationships are often quite complicated. Once sub-systems have been analyzed, educational institutions can formulate comprehensive plans to improve the entire system. The Baldrige Criteria provide organizations with an integrated, results-oriented framework for implementing and assessing processes in order to better manage all aspects of an organization.

Based on the responses from community college leaders, Baldrige practices seem to be one method of moving community colleges to stronger data collection, planning, and data driven decision-making. However, community college leaders indicated that Baldrige practices can be extraordinarily difficult and can cause community colleges frustration at times. Another challenge of Baldrige practices is sustaining them as an overarching framework for the institution. The college's planning and research functions must be strongly linked and well coordinated in order to accomplish the driving emphasis of Baldrige.

Although the Baldrige Educational Quality Criteria may not be the solution to every community college's accreditation and accountability needs, for many community colleges across the nation, the Baldrige Educational Quality Criteria have proven to be a useful method of assessment in a comprehensive framework that yields more meaningful information for institutional improvement. Hertz (1999, January) states, "By helping education institutions assess and improve their overall performance and strive for excellence in all they do, the Baldrige performance excellence criteria drive improvements beyond most accreditation requirements" (p. 1). The research supports these statements.

For community college leaders who have not yet considered using the Baldrige Educational Quality Criteria, this researcher strongly recommends reviewing the Criteria and their unique focus in order to examine the breadth and depth of the questions in comparison to accreditation standards. This comparison will certainly prove that although the use of the Baldrige Educational Quality Criteria is not a simple task, the value of these integrated and interrelated questions will pinpoint the areas of difficulty and assist institutions with implementing profound improvements throughout the organization.

The infusion of the Baldrige Criteria into the accreditation process might be the most useful solution for community colleges as they seek to improve institutional effectiveness. By using many of the Baldrige elements, regional accreditation can be improved and significantly strengthened. Charles Sorensen (2002, March 8), Chancellor of the University of Wisconsin (UW)-Stout declared, "We [at UW-Stout] believe more and more schools, as well as accreditation bodies, will adopt the processes and disciplines [of the Baldrige Educational Quality Criteria] to make institutions of higher education more responsive, accountable, and transparent" (Datatel, Inc. Advertisement, p. A33). Sorensen's words carry additional significance because the University of Wisconsin-Stout was recently honored as the first institution of higher education to win a Malcolm Baldrige National Quality Award. The encouragement and support from regional accrediting associations would further facilitate the use of key elements of the Baldrige Educational Quality Criteria as another model for measuring institutional effectiveness in community colleges.

## SUMMARY

This research study has provided new information about the value, practice, and personal insights from community college leaders regarding quality principles. This information can be used by other community colleges that may be interested in strengthening institutional effectiveness processes. Some of the most important conclusions from this study are that community college leaders need to be well versed in the Baldrige Educational Quality Criteria, have a thorough understanding of how the Criteria can apply to their particular institution, and be willing to strongly support the infusion of the Criteria at their institutions. Leaders play a vital role in a quality improvement effort and guiding how these principles can serve as the driving force behind increased institutional effectiveness at their colleges. This study also provides an original instrument developed by this researcher that could be used in future studies to further investigate the importance and applicability of quality concepts on community college campuses.

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# APPENDICES

## Appendix A Letter of Introduction from the Researcher

January 2, 2002

Dear Questionnaire Participant:

As a doctoral student in the Community College Leadership Program at Oregon State University (OSU), I am requesting your participation in my dissertation research study titled "Baldrige Quality Criteria as Another Model for Accreditation in American Community Colleges." The issue of using quality principles and practices in community colleges for institutional planning and as a measurement of success has been the topic of recent discussions by community college leaders and reviewed in the latest literature.

You were selected as a participant because of your position as a community college leader and your experience with quality principles. Because only a sample of community college leaders will be surveyed, your participation is vital to the success of this study.

Watch your e-mail for a message from me with the link to the web-based questionnaire embedded in the message. Please complete the questionnaire immediately. Your participation in this study is voluntary and you may refuse to answer any question.

The answers you provide are strictly confidential and special precautions have been established to protect the confidentiality of your responses. Your questionnaire will be destroyed once all responses have been tallied. Your responses, together with others, will be combined and used for statistical summaries only.

Please accept my sincere appreciation for your participation in this study. Your returned, completed questionnaire will grant me permission to use the results in my dissertation and to use the data in any papers or chapters that may be published.

If you have any questions regarding the study, please contact me 909-594-5611 extension 5435. My dissertation chairperson is Dr. Alex Sanchez who may be contacted at 541-737-8202. Any questions regarding your rights as a participant may be directed to the Oregon State University Institutional Review Board, Research Office, 312 Kerr Administration Building, Corvallis, OR 97331 or by calling 541-737-3437.

Sincerely,

Jane Faulkner
Doctoral Student
Community College Leadership Program, OSU

Appendix B Letter of Support from the Higher Learning Commission

January 2, 2002

Dear Community College Leader:

Over the past few years, the Higher Learning Commission of the North Central Association of Colleges and Schools has been focusing its efforts on an innovative new project: an alternative re-accreditation process based on systematic quality improvement principles that we call the Academic Quality Improvement Project (AQIP). As the Director of the AQIP, I have been actively involved in the establishment of this process throughout the nineteen states in the Higher Learning Commission's region.

To assist in this work, we are interested in obtaining research information about the value and practice of quality concepts from community college leaders throughout the nation. You will soon be receiving an e-mail correspondence - with a web-based questionnaire regarding quality concepts in American community colleges - from Jane Faulkner, a doctoral student at Oregon State University. Jane has been a community college administrator for the past 15 years and has been actively involved in quality implementation efforts on her campus. Like you, she is keenly interested in the benefits as well as the challenges of implementing quality initiatives in a community college setting.

I urge you to watch for Jane's e-mail, complete this important questionnaire, and return it to her promptly. Jane is focusing her dissertation research on quality practices in community colleges, and your input will be critical to the significance of the data she collects.

Thank you, in advance, for taking the time to complete her questionnaire and returning it. Your input will help improve all of our efforts toward encouraging continuous improvement and supporting organizational change on community college campuses.

Sincerely,

Stephen D. Spangehl
Director, Academic Quality Improvement Project

# Appendix C Reminder Postcard

About one week ago, a web based Baldrige/Institutional Effectiveness Questionnaire was sent to you via e-mail. You were selected as a participant in this dissertation research study because of your experience with quality principles.

If you have already returned the questionnaire, please accept my sincere thanks. If not, please complete it immediately. Because this questionnaire was only sent to a small number of community college leaders, your completed questionnaire is critical to this study.

If you did not receive the questionnaire or have deleted it from your e-mail, please contact me at 909-594-5611 ext. 5435 and I will make certain that another one is sent to you immediately.

Sincerely,

Jane Faulkner, Doctoral Student, Oregon State University
Community College Leadership Program

# BALDRIGE/INSTITUTIONAL EFFECTIVENESS QUESTIONNAIRE

This questionnaire is designed to measure the categories of value and practice related to Baldrige Educational Quality Criteria and institutional effectiveness measures at your institution. Your thoughtful and honest responses to this questionnaire are appreciated.

You are part of a very small group of community college leaders selected to share feedback regarding institutional perceptions, experiences, and feelings related to the following questions. The personal information and answers indicated on this questionnaire will be used solely for the purpose of this research study. Complete confidentiality of your responses will be maintained.

**Instructions:**

**Using the dual scales for the categories of "Value" and "Practice," please rank the following questions that best represent an institutional perspective related to the use of quality principles and institutional effectiveness:**

There are no right or wrong answers. Your answer provides an institutional perspective about a given statement.

**Value**
(How much does your institution value this?)

**Practice**
(How well does your institution practice this?)

| Does not value at all | Of little value | Values this somewhat | Values this a great deal | Does not apply |  | Does not apply | Always practices this | Usually practices this | Rarely practices this | Does not practice this at all |
|---|---|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  | **I. College Leadership** |  |  |  |  |  |
| ○ | ○ | ○ | ○ | ○ | A. Leaders at your college use quality tools and practices in daily decision-making. | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | B. Leaders at your college are the driving force behind continuous improvement efforts. | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | C. Leadership effectiveness is measured through formal feedback from staff and faculty members. | ○ | ○ | ○ | ○ | ○ |
|  |  |  |  |  | **II. Strategic Planning** |  |  |  |  |  |
| ○ | ○ | ○ | ○ | ○ | A. The college's strategic development process is linked to key performance indicators (KPIs). | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | B. The college's performance is assessed relative to comparisons and/or key benchmarks. | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | C. Planning processes have demonstrated their effectiveness in moving the college ahead. | ○ | ○ | ○ | ○ | ○ |

| Does not value at all | Of little value | Values this somewhat | Values this a great deal | Does not apply | | Does not apply | Always practices this | Usually practices this | Rarely practices this | Does not practice this at all |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | **III. Students and Stakeholders** | | | | | |
| ○ | ○ | ○ | ○ | ○ | A. The college has systematic processes for determining student needs. | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | B. The college has a systematic process to assess student satisfaction. | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | C. The college systematically gathers input/feedback from external stakeholders such as parents, taxpayers, and community leaders. | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | D. The college systematically evaluates the effectiveness of its student services. | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | E. The college uses the results of the student services evaluations as a basis for improvement. | ○ | ○ | ○ | ○ | ○ |
| | | | | | **IV. Information and Analysis** | | | | | |
| ○ | ○ | ○ | ○ | ○ | A. The college uses information and data to improve college performance. | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | B. The college analyzes and reviews overall performance to identify key areas for improvement. | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | C. Institutional research services at the college are rated highly by those who depend on them for information. | ○ | ○ | ○ | ○ | ○ |
| | | | | | **V. Human Resources Development** | | | | | |
| ○ | ○ | ○ | ○ | ○ | A. The college's faculty and staff position responsibilities promote a student focus. | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | B. The college promotes cross-functional cooperation between divisions and departments. | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | C. The college has a systematic process to assess the work environment of staff. | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | D. The college provides a staff development program for employee improvement. | ○ | ○ | ○ | ○ | ○ |

## VI. Educational Programs and Processes

| Does not value at all | Of little value | Values this somewhat | Values this a great deal | Does not apply | | Does not apply | Always practices this | Usually practices this | Rarely practices this | Does not practice this at all |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | A. The college has processes to measure student learning outcomes. | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | B. Educational programs are evaluated through comparison with other colleges and organizations | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | C. The college conducts regular surveys to assess recent graduates' perceptions regarding their educational experience. | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | D. The college conducts regular surveys to assess recent graduates' job placement in fields related to their educational course of study. | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | E. The college systematically gathers input/feedback from local employers regarding the preparedness of recent graduates. | ○ | ○ | ○ | ○ | ○ |

## VII. Business Process Management

| Does not value at all | Of little value | Values this somewhat | Values this a great deal | Does not apply | | Does not apply | Always practices this | Usually practices this | Rarely practices this | Does not practice this at all |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | A. College business operations use feedback from those served to continuously improve. | ○ | ○ | ○ | ○ | ○ |
| | | | | | B. The college measures the productivity of its business operations. | | | | | |

**1. How was your institution transformed/changed by using quality criteria? Please cite an example.**

**2. Are the Baldrige Educational Quality Criteria an equally strong method for quality assurance as compared with traditional accreditation? Why?**

**3. What are the institutional challenges of using Baldrige Educational Quality Criteria?**

**4. Why should other institutions consider using Baldrige Educational Quality Criteria?**

**5. What advice would you give to other community college leaders who are considering the use of quality criteria?**

**6. How is an institution that is using Baldrige Educational Quality Criteria perceivably different than other community colleges?**

## DEMOGRAPHIC INFORMATION

**1. Your level of involvement in the Baldrige/quality process on your campus:**

☐ Very little ☐ Little ☐ Some ☐ Major

**2. Your position at the college is best described as:**

☐ President or CEO
☐ Chief Financial Officer
☐ Accreditation Liaison Officer
☐ Staff Development Officer
☐ Chief Academic Officer
☐ Chief Student Service Officer
☐ Institutional Researcher
☐ Other (please list): ____________________

**3. How long have you held this specific position at your present college?**

☐ Less than a year ☐ 1 – 3 years ☐ 3 –5 years ☐ 5 – 7 years
☐ 7 – 9 years ☐ 9 – 11 years ☐ 11 – 13 years ☐ 13 – 15 years
☐ 15 – 17 years ☐ 17 – 19 years ☐ over 19 years

**4. What is your gender?** ☐ Male ☐ Female

**5. Which best describes your community college:**

☐ Urban ☐ Suburban ☐ Rural

**6. What is the size of your community college based on total headcount?**

☐ 1,000 or fewer ☐ 1,001 – 5,000 ☐ 5,001 – 10,000
☐ 10,001 – 15,000 ☐ 15,001 – 20,000 ☐ more than 20,000

**7. How long ago was your most recent institutional accreditation:**

☐ Within the last year (2000-01) ☐ Two years ago (1999-00)
☐ Three years ago (1998-99) ☐ Four years ago (1997-98)
Five years ago (1996-97) ☐ Six years ago (1995-96)
☐ Seven years ago (1995-94) ☐ Eight years ago (1993-94)
☐ Nine years ago (1992-93) ☐ Ten years ago (1991-92)

**8. Were you personally involved in your institution's previous accreditation?**

☐ Yes ☐ No

**9. Has your institution applied for a National Baldrige or State Quality Award?**

☐ Yes ☐ No

**10. Were you personally involved in writing or preparing the application for the Quality Award?**

☐ Yes ☐ No

Thank you very much for your time and cooperation in answering this questionnaire. I hope the findings of this study will be useful in improving institutional planning processes and organizational systems.

If you would like a copy of the questionnaire results, please list your name and address in the space below.

______________________________________________

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